BHARATHIDASAN UNIVERSITY
TIRUCHIRAPPALLI – 620 024

CENTRE FOR DISTANCE EDUCATION

KNOWLEDGE AND CURRICULUM

B.Ed. II YEAR

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UNIT-1 KNOWLEDGE EDUCATION CURRICULUM AND PERSPECTIVES

Structure

1.1 INTRODUCTION

Knowledge is habitually defined as a belief that is true and justified. The philosopher Plato famously defined knowledge as "justified true belief". On the other hand, knowledge is a familiarity, awareness of understanding of someone or something, such as facts, information, descriptions, or skills, which acquired through experiences or education by perceiving, discovering or learning. On comparing knowledge and wisdom, knowledge is the accumulation of facts and information and wisdom is the synthesis is of knowledge and experiences into insights that deepen one's understanding of relationships and the meaning of life. Education is really a means to discover new things which we don't know about and increase our knowledge. Hence, it is important to provide effective teaching-learning experiences by means of constructing productive curriculum. In developing curriculum, all the foundations (Philosophical, Psychological, and Sociological Foundations) of development of curriculum should be accommodated with respect to the learners and the society. Educators, curriculum makers and teachers must have promoted philosophies that are deemed necessary for planning, implementing and evaluating a school curriculum. This philosophical foundation define the purpose of the school, the important subject to be taught, the kind of learning students must have and how they can acquire them, the instructional material, methods and strategies to be used and how students will be evaluated. It is found that Curriculum is influenced by psychology and Psychology provides information about the teaching and learning process. This psychological foundation seeks answers as to how a curriculum be organized in order to achieve students' learning at the optimum level, and as to what amount of information they can absorb in learning the various contents of the curriculum. Education takes place in society. Education is essentially a social process and life-long process and social environment educates the child education has a social role to play. Since the society is dynamic, there are many developments which are difficult to cope with and to adjust to. Hence, sociological foundation of curriculum helps in developing democratic skills and values in students. In this unit, we will discuss about the importance of knowledge with its acquisition, modes of education and its scope and determinants of curriculum with its foundations.

1.2 OBJECTIVES

After going through this unit, you will be able to:

- Bring the meaning of knowledge
- Identify the ways of acquiring knowledge
- Explain the forms of knowledge
- Understand the different modes education
- Define the curriculum
- Explain the nature and scope of curriculum
- Differentiate the curriculum from syllabus
- Discuss the foundations of curriculum

1.3 FOUNDATIONS OF EDUCATION

There are three important foundation of education - Ontological (related to the nature of knowledge) Epistemic (related to theory of knowledge) and Axiological (related to values). Of these three, epistemic foundation is the most fundamental one. As you know, epistemic means relating to knowledge it is only knowledge that reveals reality and facilities value realization. Knowledge can refer to a theoretical or practical understanding of a subject. It can be implicit or explicit; it can be more or less formal or systematic. Information and knowledge are growing at a far more hastily pace than ever before in the history of humankind. 'More than ever, the sheer magnitude of human knowledge renders its coverage by education an impossibility; rather, the goal of education is better conceived as helping students develop the intellectual tools and learning strategies needed to acquire the knowledge that allows people to think productively' (Bransford, J. D. 2000). Another important thing you have to remember is that philosophy implies both process of seeking wisdom and wisdom itself. This wisdom is nothing but theoretical and practical knowledge related to problems of life and universe which is derived out of systematic, critical and universe and beyond and seeking the same becomes the goal of life.

Concept of knowledge

Chamber of dictionary answer the question for what is knowledge is (i) as the fact of knowing, (ii) information or what is known; (iii) the whole of what can be learned or found out. Further, it also knowledge as assured belief, that which is known, information, instruction, enlightenment, learning, practical skill and acquaintance. Considering all the above that are worthy of knowing. A term widely used by teachers, educators and policy makers is concept of knowledge and it refers to the body of information that teachers teach and that students are expected to learn in a given subject or content area such as English, Language Arts, Mathematics, Science, or Social Studies. Concept of knowledge generally refers to the facts, concepts, theories and principles that are taught and learned rather than related to skills such as reading, writing, or researching that student also learns in academic courses.

Importance of knowledge

Knowledge is not truth. Truth is inferred on the bases of available knowledge. The truth about the universe around us or the macrocosm to the microcosm is inferred knowledge. The knowledge of galaxy is inferred; so is the whole nuclear science, space, DNA etc,. Much of what we knew is not observed knowledge. They are known through their effects, properties, and characteristics. It is at the stage of inference that employment of methods for drawing inferences that philosophy is at work. Knowledge certified by the philosophy enters the curriculum of education. Methods approved by philosophy for building knowledge from the bases of methods and techniques of teaching. The truth arrived by philosophy sets the goals and objectives of education as well as instruments and uses of evaluation. Like this knowledge helps philosophy to interpret, guide, monitor and validating the educational process at every stages.

Nature of knowledge

Epistemology is the theory of knowledge. It deals with knowledge as a universal matter and aims to discover what is involved in the process of knowing. As such it belongs for the most part to the critical or analytical aspects of philosophy. It asks many questions. Is there something common to all the deferent activities to which we apply the term “knowing”? Does it know a special sort of mental act? Can we anything beyond the objects with

which our senses acquaint us? Does knowing make any difference to the object know?

These are not idle questions. For if we can know that the knowledge we possess is beyond error, that knowledge becomes a foundation of our search for more of it. Admittedly it may folly to believe that we shall ever discover true knowledge when all we have ever known is only an approximation of it. Doubtful knowledge then only generates more doubtful knowledge. As Santayana wrote, knowledge is a "torch of smoky pine that lights the pathway but one step ahead, across a void of mystery and dread". Still we must strive, though a step at a time, to understand as well as we can the source of it, we shall be in a better position to understand the true nature of that reality to which it is related.Unlike philosophy, epistemology is not interested in amassing and classifying facts and data and subjecting them to statistical process. The epistemologist has ideas about how people think and feel, but he does not claim to be able to explain them scientifically. He is, after all, a philosopher and not a social scientist. The epistemologist may possess all the information commonly described as "knowledge', but still he will ask the question, 'what is knowledge after all'? and he may not come up with an answer.He also examines relevant psychological concepts such as perception, memory, and reinforcement to determine whether they are consistent, not necessarily with factual matters but with themselves. Knowing the psychological problem is to state and assess the very grounds on which knowledge rests and claim to knowledge are made. There are, of course, different types of knowledge, are important.

1.4 GENESIS OF KNOWLEDGE

Now let us examine the different sources of knowledge

Sense Experience Empirical Knowledge

Sense experience is the major source of knowledge which comes through senses. Modern science is empirical in methods; concepts are formed as a result of sense experience. By seeing, hearing, smelling, feeling and tasting. We form our composite of the world around us. An empirical cautions us to "look and see", whereas a rationalist tells us to "think things through".

Reason Rational Knowledge

The view which says that our knowledge is essentially knowledge of universal and that these are known by the mind and not by senses is called Rationalism. Reasoning or through is the central factor in knowledge forms which we derive universally valid judgments that are consistent with one another certain mathematical and logical truths, for instance, are 'self evident' kinds of knowledge that appeal to our reason. And two contradictory statements both cannot be true at the same time. Moreover, when we say that if A is greater that B and B is greater than C, and then A is greater than C, here we are making a true statement based on reasoning and not derived from the sense.

Experimentation

The experimentation can be defined as a process of observation under controlled conditions." We know the bridge is safe because six of us just crossed it" this instance suggests that knowledge is the product of tested experiences in which sense perception is an ingredient but in which the effect of what happens is the basic measure. We depend on experimental knowledge for particular facts of everyday world. However, our senses deceive at times. I would like to draw your attention towards an example of the stick that looks vent in water but turns out to be straight when we touch it. At times we see what we are conditioned to see not what is actually there. The accuracy of the sense may be reduced further by such elements as cold, fog, heat, noise or smog. From this discussion you are able to identify that experiment is another important source of knowledge.

Authority

The first fundamental source of knowledge is authoritarianism. It may, however, be noted that its central doctrine is that, ultimate source of knowledge is authority of different kinds - the God, the Sate, Tradition of the Expert. You should notice that authoritative knowledge it accepted as true because, it comes from experts. We shall now analyze why authoritative knowledge is inadequate. The reason for this conclusion is what constitute authority and by want criterion we should select our authority as against another. Most of our factual knowledge is based on authority.

Intuition

Intuition is perhaps the most personal way of knowing. It occurs on what psychologists call the subliminal level; beneath the "threshold of consciousness" it is connected intimately with feeling and emotion and contrasts with the logical process usually associated with thinking at conscious level. As persons we see "in a sudden flash of insight" that something is the case. We apprehend knowledge directly gain direct access into the heart of reality. Yet, we do not know how we acquired this knowledge. Only an intense feeling seems to convince us we have discovered what we were looking for.

Revealed Faith Knowledge

Faith is in part the king of knowledge that God discloses to man. In this omnisense God inspires certain men to record. His revelation in permanent form, whereby it may become accessible to all mankind for the Hindu's it is contained in the Bhagavad-Gita and the Upanishads. For Christian's and Jew's it is contained in the Bible: for the Mohammedan's, in the Khoran. Divinely authenticated, it promises that those who accept it never, according to their own rights, can be mistaken. Human interpretation may distort parts of it, but in itself it is Devine truth. You will agree that revealed knowledge is confined to whatever a religion or sect accepts to be the world of God. It is also based on supernatural phenomena, but it can apply to natural phenomena, as in Genesis. There can be very little argument about the credibility of its source. It neither can be proved nor disproved. One accepts it on faint, but stressed whenever possible by reason and critical experience.

1.5 TYPES OF KNOWLEDGE

Philosophers were classified the types knowledge in to the three major types that are personal, procedural and propositional knowledge.

1.5.1 Personal Knowledge

The first kind of knowledge is personal knowledge, or knowledge by acquaintance. This is the kind of knowledge that we are claiming to have when we say things like "I know Incidental music." The first type of knowledge is personal knowledge, or knowledge by acquaintance. Knowledge in this sense is to do with being familiar with something. Personal knowledge does, possibly, involve possessing at least some propositional knowledge. What is

important is that personal knowledge involves more than knowledge of propositions.

1.5.2 Procedural Knowledge

The second kind of knowledge is procedural knowledge, or knowledge how to do something. People, who claim to know how to juggle, or how to drive, are not simply claiming that they understand the theory involved in those activities. Rather, they are claiming that actually possess the skills involved, that they are able to do these things. Procedural knowledge clearly differs from propositional knowledge. It is possible to know all of the theory behind driving a car (i.e. to have all of the relevant propositional knowledge) without actually knowing how to drive a car (i.e. without having the procedural knowledge). You may know which pedal is the accelerator and which is the brake. You may know where the handbrake is and what it does. You may know where your blind spots are when you need to check them. But until you get behind the wheel and learn how to apply all this theory, you do not know how to drive. Knowing how to drive involves possessing a skill, being able to do something, which is very different to merely knowing a collection of facts.

1.5.3 Propositional Knowledge

The third kind of knowledge, the kind that philosophers concern about most, is propositional knowledge, or knowledge of facts. When we say things like "I know that the internal angles of a triangle add up to 180 degrees" or "I know that it was you that ate my sandwich", we are claiming to have propositional knowledge. Although there are several different types of knowledge, the primary concern of epistemology is propositional knowledge. This is knowledge of facts; knowledge that such and such is the case. The difference between the three types of knowledge is not as sharp as it might at first appear. Personal knowledge does seem to involve knowledge of at least some propositions. Simply having met someone is not enough to know them (in the personal knowledge sense); you also have to know a few things about them (in the propositional knowledge sense). Procedural knowledge also seems to involve some propositional knowledge. If you know how to drive a car (in the procedural knowledge sense) then you presumably knows certain

facts about driving (e.g. which way the car will go if you turn the steering wheel to the left). What is important is that propositional knowledge is not enough to give you either personal knowledge or procedural knowledge. Personal knowledge involves acquiring propositional knowledge in a certain way, and procedural knowledge may entail propositional knowledge, but the same propositional knowledge certainly does not entail procedural knowledge.

1.6 STRUCTURE AND FORMS OF KNOWLEDGE

Knowledge acquisition is the process used to define the rules and ontology required for knowledge based system.

1.6.1 Ways of Acquiring Knowledge

Knowledge can be acquired along the following ways:

a. Observation and Experience

This may be more or less sophisticated, ranging from a simple, "I saw" to carefully design controlled experimentation.

b. Reason / Logic

Taking other knowledge as data, by logical operations knowledge can be inferred. For example the theoretical construct, the electron, is derived by logical inferences from observations and experiment. Such knowledge, being derivative, cannot be better than the knowledge upon which it is founded. Modeling a situation sometimes allows those with a hands-on viewpoint to learn howto do something. This pragmatic approach is often seen in computer programming.

c. Testimony

Knowledge based on the acceptance of testimony involves accepting what others say. For example, I only know that Kent is a county of England, that the First World War was horrendous. This seems to be a common way we get knowledge but is seen by philosophers as problematic. See Testimony, philosophical problems of.

d. Authority

Knowledge based on authority may rely upon the reputation of an individual such as Aristotle or Einstein or perhaps on institutional authority such as that of the Roman Catholic Church or Oxford University. Note that an authority may adopt knowledge upon other criteria such as divine revelation or

observation as well as upon authority. Authority may have a political basis in the sense that some political process, perhaps involving status as well as simple voting, peer review, or comment. This is familiar to participants in academia.

e. Revelation

Many people believe knowledge may be obtained via revelation or even divine revelation, which may be directly from God or another spirit, perhaps conveyed through a religious text or texts, such as the Bible, although there is no evidence to support this claim.

1.6.2 Meaning of Information

a. Wisdom

'Wisdom is the right use of knowledge. To know is not to be wise. Many men know a great deal, and are all the greater fools for it. There is no fool so great a fool as a knowing fool. But to know how to use knowledge is to have wisdom' (Charles Spurgeon). Wisdom is the knowledge that is gained by having many experiences in life; the natural ability to understand things that most other people cannot understand; knowledge of what is proper or reasonable good sense of judgment. On the other hand, wisdom refers the ability to use one's knowledge and experience to make good decisions and judgments.

b. Instruction

The instruction does not involve the instruction between the teacher and the pupils. Still in instruction can divert the pupils towards objectives. The main difference between teaching and instruction is that the teaching includes instruction but the instruction does include teaching. Hence, the teaching is instruction but the instruction is not teaching. In spite of this, all three cognitive, affective and psychomotor aspects of the pupils can be replacing the teaching. In short, instruction is that process which diverts the pupils towards the objective aspect.

c. Teaching

Teaching is an innate contact between a more mature personality and less mature one which is designed further the education later (H.C. Morrison, 1943). Teaching is a kind of mentoring. In teaching an interaction occurs

between the teacher and the pupils. As a result of which the pupils are diverted towards the objectives. In other words, the main element of teaching i.e. the mutual relationship or the interaction between the teacher and pupils advances the pupils towards objectives.

d. Skills

A teacher makes use of number of methods and techniques to bring about effective learning. The techniques includes, motivating the students, explaining, questioning, and writing on the black board, using teaching aids so on. The teacher could also make use of nonverbal behaviors such as smiling, nodding and gesturing. These groups of activities are called skills.

Check Your Progress 1

Notes: a. Write your answers in the space given below.

b. Compare your answers with those given at the end of this unit.

1. Enlist the different sources of knowledge.

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2. Write any three ways for acquiring knowledge.

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1.7 MODES OF EDUCATION

1.7.1 Formal Education (Face to face)

Education is a collective function. Its objectives are to help the child to adapt to the social environment in which she/he is destined to live. It is through education that society assures for its citizens a sufficient community of ideas and sentiments, without which any society cannot progress and perpetuate itself. In order that it may be able to produce this result, it is also necessary that education should not be completely abandoned to the arbitrariness of individuals, but be formalized and coordinated by an agency like the state, keeping if focus the broad social aims. It is up the state (Government) to broadly identify ideas, sentiments, and skills that must be impressed upon a child to help him/her adjust to the milieu in which he/she must live. Thus,

education which is controlled and planned consciously by the state or its designed agency such as the school with certain specific objectives is formal education. In such a system of education there are rigid rules of age of admission, content and duration of courses, procedures of examination, selection of elective subjects' etc. Schools, colleges, technical institutions, and universities are offering face to face education.

1.7.2 Non-formal Education

In contrast to formal education which is defined as teaching of certain knowledge, or instruction in a particular branch of learning in a structured and programmed manner, examining etc., non-formal education refers to consciously organized and patterned instruction in certain areas of knowledge, skills or values, which takes place outside the school or similarly designated institutions, with flexibility regarding age, period of instruction and with a choice of what to learn. It caters to the needs of adults, farmers, women, dropouts' etc., which are not for various reasons, able to take advantage of formal education, either because they have passed the age for it or because they are employed. Non-formal education is a very important, mode through which India's goals of universal elementary education and literacy are being promoted. The Indira Gandhi National Open University and the National Open Schools – both centrally operating from New Delhi and part time non-formal education centers are typical examples of the system. The importance of non-formal mode of education to reach different section of the society is increasing in the present India education scenario, mainly because the formal system is unable to meet the demand for education for all the segments of the society.

1.7.2.1 Open University

The vast numbers who belong to the working class, artesian and adult peasants have been denied educational facilities on account of the accident of birth. Immediately after independent in India, vast programmes of adult literacy and education were launched. The idea was to bring education to the teeming, millions of illiterate who should exercise franchise with discretion. With the example of universities of the air in UK and USA which hoped adults earn a degree, experiments in similar concepts to be tried in India.

The difference between the conventional university and Open University is that while the former is on the abstraction and tradition, the latter is on the concreteness and varied types of mass media. The Open University exploits the technical resources of radio, television, films and computers. Students receive the study materials through mail. There are part-time class tutors and counsellors to guide them. Face to face contact instruction and laboratory work are provided during summer school programme. The package sent by mail contains notices about the television and radio programmes. The most powerful stimulus comes through television. But in view of the limited possibilities of using television in our country, the programme heavily depends on the support of other mass media materials like radio, films, computers, Television, etc.

1.7.2.2 Open and Distance Learning (ODL)

Open schools and open Universities are based on the concept of Open learning systems which have assumed great significance now in our country as is seen on its emphasis in the new education policy (NEP). We are still, even after four decades since we achieved our independence, faced with the problems of literacy, school dropouts and the gigantic task of providing educational opportunities for the disadvantaged segments of the population which is often bypassed our screened out of the formal educational system, its methods and a rather rigid bookish curriculum. The open learning system has now emerged as viable practical alternatives to the traditional and institutionalized formal education. Open learning system through the open school and university programme, try also providing opportunities for those who are desirous of learning or acquiring new productive skills but whom, due to a variety of reasons, cannot afford to go through the rigid programme of formal instruction in our schools and colleges. The open learning system is flexible enough to cater to varied learner needs and demands, and its openness is seen in respect of curriculum, organization, course development, delivery of content of instructions well as assessment procedures. One can learn at one's own pace and progress through the educational stream both vertically and horizontally. Open schooling uses a variety of instructional media and tries to foster self directed leaning in the participants. The open learning structure is articulated to the needs of the school leavers, working adults, farmers and artisans'

housewives and it offers a second chance to learn particularly to the disadvantaged section of the community. Open learning systems appear to be parts of formal full time instruction. Open learning implies a change in the methods of teaching, as there is need for using modern methods of communication to overcome the problems of distance education the source of instruction and its equally change in educational assumptions resulting in the development of new curriculum styles and tools of evaluation. Often they are interdisciplinary, life oriented and of particular nature. Open Universities have been established in order to provide facilities for open and flexible learning to students. Objectives of open learning include the following;

a. To provide quality opportunity in higher education to a large segment of the population, including those already employed or housewives.
b. To enable those students to learn who are unable to admission in formal institutions for one reason or another.
c. To facilitate learning and improve qualifications for promotions, change of jobs, etc.
d. To enroll the learners without any age limits.
e. To provide range university level course
f. To provide high standard of teaching, learning and evaluation in open mode.
g. To offer programmes of learning other than those offered in other universities.
h. To offer degree, diploma and certificate courses in different subjects with greater flexibility and diversity in curricula.
i. To promote national and integration by offering the same course across the country.

Open universities have direct access to the national transmission of television and radio programmes. Off-peak transmission times are better suited for open learning broadcasts. Open University colanders are designed to be different from academic sessions in order to avoid clash. Open universities offer admission to students who are motivated to pursue self-study, they are free to chose;

- What they wish to learn
- How they wish to learn
- When the wish to learn
- Wherever they wish to learn

Doors of higher education are thus thrown open to all learners who aspire to learn. Flexibility is at the base of all open learning. Entry requirements, number of years to complete the course, alternative combination of subjects all of these are flexible. It is the final achievements and standards of success which cannot be compromised.Open University programmes in India are gaining greater popularity due to following reasons:

a. The government of India has accorded the same status to the degrees /diploma of the open universities as of the formal institutions of learning
b. Open learning permits students to learn and earn at the same time.
c. It offers a range of flexibility in respect of what to learn, when to learn, how to learn and where to learn.
d. Open University courses are very comprehensively planned, well printed and well presented
e. Video and audio facilities are supporting the courses
f. There are fewer constraints, fewer rules and regulation and greater learning autonomy.
g. There are no geographical and background barriers to admission and learning.

1.7.2.3 Distance Education

Distance Education is education which either does not imply the physical presence of the teacher appointed to dispense it in the place where it is received or in which the teacher is present only on occasion or for selected tasks. Distance Teaching may be defined as the family of instructional methods on which the teaching behaviors are executed apart from the learning behaviors, including those that in a contiguous situation would be performed in the learner's presence, so that communication between the teacher and the learner must be facilitated by print, electronic, mechanical or other devices. (Moore,1973). The following are the main objectives of Distance Education;

- To advance and disseminate learning and knowledge by diversity of means
- To provide second opportunity to study to those who missed such an opportunity earlier
- To provide a chance who those who could not go the conventional system and they would now like to study
- To improve the quality and standard of education. There is a need make education relevant to the needs of the country and to provide lifelong education for working people and housewives
- To reduce the pressure for the secondary and higher education students
- To provide opportunity for higher education to a large population
- To promote the educational standard
- To encourage the system of education
- To coordinate and determine the standards of education of the country

1.7.3 Informal Education

Informal Education is a general term for education outside of a standard school setting. Informal Education is the wise, respectful and spontaneous process of cultivating learning. It works through conversation and the exploration and improvement of experience. On the other hand, Informal learning is the unofficial, unscheduled, impromptu way most of us learn to do our jobs. Informal learning is like riding a bicycle: the rider chooses the destination and the route. The cyclist can take a detour at a moment's notice to admire the scenery or help a fellow rider. It can refer to various forms of alternative education: i. Home schooling ii. Self- teaching iii. Youth work. Informal education refers even too emotions, feelings, believe, superstitions, etc. Gained knowledge as a result of formal, non-formal educations sooner or later if passed through prism of informal education and takes the form of values, believes traditions, etc. Informal Education may be viewed as the learning that comes as a part of being involved in youth and community organizations. In these settings there are specialist workers or educated whose job is to encourage people to think about experiences and situations. This education is a spontaneous process helping people to learn. It helps to

cultivate communities, associations and relationships and hence it has following characteristics;

- It operates in a wide range of settings including center, schools, colleges, peoples' home, workplace and social, cultural and sporting setting
- It looks to create or deepen situations where people can learn spontaneously explore and enlarge experience and make changes.
- It emphasis on building a democratic relationship and organization that allows people to share in community.

And hence, informal education has the following Outputs;

- Responsiveness when interact with atmosphere.
- Possibility to freely act in unknown situation.
- Possibility of an individual learning, without any obligations.
- Free choice and change of interest.
- Freedom of self-formation.
- Develop the skill of human learning

1.8 TEACHING IN MULTI-CULTURAL SETTING

Students from various backgrounds bring so much life into the classroom. Diverse classroom environments provide wonderful opportunities for rich and varied instruction. This motivates to make the information more applicable to their lives, experiences, and cultures. Every classroom is a cultural community reflective of the disciplines and perspectives studied. Successful learning requires an intercultural approach where students are responsible for listening to understand and for understanding their own perspectives and how they acquired them. One effective approach to this challenge is to attend to the variety of learning styles in any college classroom. Understanding multiple learning styles allows one to focus on individual students' own learning styles; sub-groups within a classroom community; and the class as a learning community. Even in the most transformed classes, however, faculty are often unaware of the variety of pedagogies that can produce enhanced learning for students and faculty and that can facilitate growth in intellectual complexity and capacity.

1.8.1 Strategies to teach multi-cultural classroom

The following are some of the strategies to teach in a multicultural classroom setting:

i. Questioning Style: Questioning techniques that personally involve students will allow them to respond in a way that reflects their cultural diversity and that will expose their fellow students to those differences (Evans, 1991).

ii. Role-Playing: Role-playing is a versatile activity that allows students to express their opinions in a realistic situation. Students can "trade places" with a fellow student or a character from a literature selection (Tiedt & Tiedt, 1990). Role-playing enables students to express and to examine their attitudes, beliefs, and feelings about prejudice and discrimination. Poetry, biography, and powerful fiction are excellent sources for both discussion and role-playing (Banks, 1989).

iii. Cooperative Learning: Many years of research and practice support the use of cooperative groups to focus on students' different strengths and styles. In addition, cooperative learning groups have been found to have strong and consistent positive effects on social relationships between culturally different students (Slavin, 1983). Group members become more accepting of classmates who are different.

iv. Exposure to Different Languages Cultures: It is important for students to recognize that English is not only language spoken in the United States. Students should be exposed to speakers of various languages. In addition to broadening students' perspectives by introducing them to different languages, such speakers can also share with students' ideas and values from other cultures (Tiedt & Tiedt, 1990).

v.Group Discussions: Group discussions stimulate thinking. The notion that thinking originates within individuals - and only after that is it ready to be shared socially - has given way to the belief that some of the best thinking results from a group's collective efforts (Sternberg, 1987). In discussions in which students examine more than one point of view, there is ample opportunity to enrich and refine their understanding by helping them to view their own interpretation in the light of the interpretations of others (Alvermann, 1991).

Check Your Progress 2

Notes: a. Write your answers in the space given below.
b. Compare your answers with those given at the end of this unit.

1. Define Formal Education.

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2. What are the ways to impart Non-formal Education?

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3. Write any five popular reasons to admit Open University programmes.

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4. Enlist the main objectives of Distance Education.

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1.9 CURRICULUM

There is available a multiplicity of concepts of curriculum since educationists give their own different interpretations of the content and functions of curriculum. Let us discuss three such concepts by three different thinkers, which represent three major contributions to the body of knowledge on curriculum. The first concept, stated by Albert Oliver, refers to curriculum merely as the educational program consisting of three important elements, such as studies, activities and guidance. The second concept, described by Philip Phenix, is based on a carefully thought out scheme of values which constitute the aims and objectives, or purposes of education. The third concept, given by Hilda Taba, looks at curriculum as the function of the public school, she list the three functions as preserving and transmitting cultural heritage, serving as an instrument for transformation of culture, and working as a means for individual development.

1.9.1 Meaning of Curriculum

Etymologically, the term curriculum is derived from the Latin word "currere" which means run or run-way or a running course. Thus curriculum means a course to be run for reaching a certain goal. Arthur J. Lewis and Mid Alice (1972) defined curriculum as "a set of intentions about opportunities for engagement of persons to be educated with other persons and with things (all bearers of information process, techniques and values) in certain arrangements of time and space."

A curriculum means, the total situation (all situations) selected and organized by the institution and made available to the teacher to operate and to translate the ultimate aim of education into reality.

In the words of Cunningham, curriculum is a tool in the hands of the artist (the teacher) to mould his material (the pupil) according to his ideal (objective) in his studio (the school). The material is highly self active, self-determining human being who reacts and responds consciously.

Curriculum may be defined as the "social environmental in motion". It is the sum total of all the activities and experiences provided by the schools to the learners for achieving the desired objectives. The courses of studies are merely a suggestion for curriculum activities and procedures, a guide for teaching to follow.

Curriculum is one of the most important items in the educative process. The curriculum, in fact, is the fundamental problem which determines the 'warp' and 'woof' of the process of education. What to do and how to do is the very essence of curriculum.

1.9.2 Nature of Curriculum

i. Curriculum as a Plan

Oliva (1982) stated that "Curriculum is a plan or programme for all experiences which the learner encounters under the direction of the school."

Carter V. Good (1959) defined curriculum as "a general overall plan of the content or specific materials of instruction that the school should offer the student by way of qualifying him for gradation on certification for entrance into a professional or a vocational field."

Tyler and Hilda Taba (1962) defind curriculum “as a plan for action, or a written document, which includes strategies for achieving desired goals or ends.”

Galen Saylor defines curriculum “as a plan for providing sets of learning opportunities for persons to be educated”.

ii. Curriculum as an Experience

Tanner and Tanner (1980) stated that “Curriculum is that reconstruction of knowledge and experiences systematically developed under the auspices of the school (or university) to enable the learner to increase his or her control of knowledge and experience.”

The Secondary Education Commission (1952-54) states that “curriculum includes totality of experiences pupil receives through the manifold activities that go on in the school, classroom, library, laboratory, workshop, play ground and in numerous informal contacts between teachers and pupils.” In other words the whole life of school is curriculum which can touch the life of students at all levels and helps in evolution of a balanced personality.

According to Crow and Crow, “curriculum includes all the learners experiences in and outside the school that are included in a programme which has been devised to help to develop mentally, physically, emotionally, spiritually and morally.”

Franklin Boobit (1918) defined that “Curriculum is that series of things which children and youth must do and experience by way of developing abilities to do the things well that make up the affairs of adult life; and to be in all respects of what adults should be”

Krug (1957) defined as “Curriculum consists of all the means of instruction used by the school to provide opportunities for student learning experiences leading to desired learning outcome”

iii. Curriculum as a Subject Matter

Doll (1978) defined that Curriculum is both a subject to be taught at colleges and universities and a field in which practitioners work. Curriculum is the formal and informal content and process by which learners gain knowledge and understanding, develop skills and alter attitudes, appreciations and values under the auspices of that school”.

Curriculum can be considered in terms of subject matter (Tamil, English, Mathematics, Science, Social Science) or content (the way of organization and assimilation of information). Historically and currently the dominant concept of the curriculum is that of subjects and subject matter there in to be taught by teachers and learned by students. Curriculum refers to the set of subjects or course offered and also those required or recommended or grouped for other purposes; thus such terms as the college 'preparatory curriculum' 'science curriculum' and 'premedical curriculum' are commonly used.

iv. Curriculum as an Objective

B.F. Skinner views the curriculum as being formulated according to behaviouristic objectives. The curriculum is the series of experiences which children and youth must have by way of attaining activity-based objectives.

W. W. Chatters (1923) viewed curriculum as a series of objectives that students must attain by way of a series of learning experiences

Edgar Bruce stated that the curriculum is "an educational instrument, planned and, used by the school to effect the purposes" (Edgar Bruce).

According to Payne, "curriculum consists of all the situations that schools may select and consciously organise for the purpose of developing the personality of its pupils and for making behaviour changes in them."

Bobbit (1918) has defined curriculum "that series of things which children and youth must do and experience by way of developing abilities to do the things well that make up the affairs of adult life: and to be in all respects of what adults should be". Here Bobbit determined curriculum objectives based on skills and knowledge needed by adults.

Ralph Tyler (1949) has presented the same views about the curriculum but he combined curriculum and instruction in his approach. Probably he thought that curriculum and instruction cannot be separated otherwise the aims and objectives of curriculum planning will not be attained.

v. Curriculum as a system

Curriculum can be considered as a system for dealing with people and the processes or organization of personnel and procedures for implementing the system (Babcock, McNeil, Untruth).

vi. Curriculum as a field of study

Curriculum can also be viewed as a field of study, comprising its own foundations and domains of knowledge, as well as its own research, theory, and principles (Orlosky and Smith, Schubert and Tanners).

1.9.3 Scope of curriculum

Curriculum, is therefore, very comprehensive in its scope. It touches all aspects of the life of the pupils- the need and interest of the pupils, environment which should be educationally congenial to them, ways and manners in which their interests can be handled and warmed up, the procedures and approaches which cause effective learning among them, the social efficiency of the individuals and how they fit in with the community around. It is intimately related with the individual as a member of the society. It embodies the educational philosophy, the values which it aims to achieve, the purposed it wants philosophy, the values it aims to achieve purposes it wants to realise and the specific goals that it wants to achieve. The emphasis is on the child. In the total education of the child, all the subjects' likes history, geography, science and language are but tools. These are the means, and therefore, the children must not be made to fit in such study.

1.9.4 Curriculum and Syllabus

Many people still equate a curriculum with a syllabus. An UNESCO publication entitled Preparing Text Book Manuscripts "(1970)" has differentiated between the curriculum and syllabus. The curriculum sets out the subjects to be studied, their order and sequence and so ensures some balance between humanities and science and consistency in the study of subjects, thus facilitating inter subject links. It follows that the curriculum determines the amount of school times allotted to each subject, the aim of teaching each subject, the place of the motor skills which take time to acquire and possibly, the variations between rural and urban school teaching. The curriculum in the schools of developing countries is often directly related to the requirements for developments. The syllabus determines the basic content of instructions in a given subject and the range of knowledge and skills which the pupils must acquire and establish in detail the themes and individual points

to be studied in each school year. The syllabus is a refined detail of the curriculum at a particular stage of learning for a particular subject.

CURRICULUM	SYLLABUS
Curriculum is based on the philosophy, goals and values of education.	Syllabus does not take into account these factors.
Curriculum refers to all the educational activities of the school in the widest possible sense	Syllabus refers to a list of unelaborated headings or book let
Curriculum is the sum total of school subjects, learning experiences and activities.	It is basically concerned with school subjects
There is prescribed co-curricular and extra – curricular activities in the curriculum.	No prescribed co-curricular and extra-curricular activities in the form of syllabus.
Curriculum includes not only indoor activities but also out-door activities of the school	Syllabus is concerned with activities mostly undertaken in the class room (in-door activities)
The curriculum has a countless role to play and it is considered as a plan, an experience, a subject matter or content and as a field map.	The syllabus has a limited role to play and has less significance in the educational world.
It is an inclusive concept. It includes syllabus also.	It is a part of a curriculum.

1.9.5 Curriculum Development

This concept is usually written and spoken as “curriculum development” the term curriculum is considered as incomplete. Curriculum development means a continuous process or never ending process. It is difficult to trace out its origin. The outcome of teaching is known through students achieving and learning. The assessment of objectives is done on the basis of change of behaviour of the learners. Learning experiences are provided through the desirable change of behaviours of the pupils which are evaluated with help of

examination. Therefore, the term is known as “curriculum development”. The main focus of the curriculum is to develop the students. The curriculum is designed to realise the objectives in terms of changing of behaviours. 1. Teaching objectives, 2.Methods of teaching, 3.Examination or testing, and 4. Feed back. These are described in brief as follows.

a. Teaching objectives: Three types of teaching objectives cognitive, affective and psycho-motor are identified in view of subject content to be taught. These objectives are written in behavioural terms. All learning experiences are organised to achieve these objectives.

b. Methods of teaching: the most important aspect for providing learning experiences is the teaching strategies. The objectives are legalised in terms of behavioural of the learners. The content is the means to select the method of teaching and level of the pupil understanding.

c. Process of evaluation: The evaluation of change of behaviour if done to ascertain about the realisation of the teaching learning objectives. The level of the pupil performance indicates the effectiveness of method of teaching and learning experiences.

d. Feed back: The interpretation of performance provides the teacher to improve and modify the form of the curriculum. The curriculum is developed and teaching objectives are also revised. The methodology of teaching is changed in view of the curriculum and objectives are to be achieved.

1.9.6 Need and Importance of Curriculum

The need of education determines the importance of curriculum. The review of literature in this reveals that there has been changing emphasis in the process of education. Thus the need of curriculum is evolved the concept of ‘curriculum development’. These needs of the curriculum have been merited as follows.

a. The human can acquire knowledge while other species cannot acquire knowledge. It is an important aspect of human beings.
b. The mental aspects are trained and developed, thus mental facilities are trained by teaching various school subjects.

c. The vocational and technical educations prepare the students for different jobs. During British period, clerks were prepared through educational curriculum.
d. The interests and attitude are developed according to the student's potentialities. Curriculum is designed as child centered approach.
e. The good citizens are prepared by the developing democratic way of life. It also develops the abilities and capacity of the teachers.
f. The ability of the self- realization is also developed by education and to make good man.
g. It also develops the feeling of appreciation and sound judgment.
h. Education is given always for future life so that he can earn his living.
i. It also prepare for scientific invention and technical development.
j. It brings performance in child. It helps in all-round development.
k. It is a powerful instrument for social change and social control.

In other words, the following are the major area of needs of Curriculum development:

a. Realisation of Educational Objectives: An organisation of education is based on the curriculum. The curriculum development is done in view to realise the objectives of education. Thus the curriculum is the means for achieving the educational objectives.

b. Proper use of Time and Energy: It provides the guidelines to the teachers as well as to students, what a teacher has to teach and what the students to learn?

c. Acquisition of Knowledge: The curriculum is the mean for the acquiring knowledge. Actually human knowledge is one but is divided in to subject for the convenience and organisation point of view. Thus the curriculum is designed for the different subjects.

d. Determining Structure Of Content: Every subject's content has its wide structure which is to be taught lower level to the higher level. Thus the main task of curriculum development is determining structure of content for a particular stage teaching. Thus the curriculum of different subjects is designed from primary level to university level.

e. Development of Personality: The curriculum is also important and significant from personality development of the student. The curriculum is designed which helps in development in good qualities in students. It helps in developing physical, social and moral qualities of learners.

f. Preparation of Text Book: The curriculum provides the guide line and bases for preparing text book for the use of students and subject teacher. If the curriculum is changed or codified, the test books are also changed. A good text has wide coverage of curriculum content of subjects.

g. Conducting Examination: Our education is examination centred. The students have forced obtain good mark in the examination. Thus examination paper is prepared as per curriculum of the subject and students also prepare the content for the examination. Thus, curriculum is basis of teaching, learning and testing.

h. Organising Teaching And Learning Situation: The teaching and learning situation are organised in view to the curriculum teaching work is also assigned with help of curriculum.

i. Decision about Instructional method: The instructional method is selected and used in view of the curricular. The same content is taught form memory to reflective level. It may be teacher centred or learner centred.

j. Development of Knowledge, Skill And Attitude: The nature of curriculum provides the basis for the developing knowledge, skills, attitude and creative ability. It also helps in developing leadership qualities.

1.10 FOUNDATIONS OF CURRICULUM

The foundations of curriculum set the external boundaries of the knowledge of curriculum and define what constitutes valid source of information from which come accepted theories, principles and ideas relevant to the field of curriculum. The foundations of curriculum represent the external boundaries of the field. The foundations of curriculum are considered usually from philosophical, sociological and psychological points of view. From the philosophical point of view, education aims to achieve self-realization and values. From the sociological point of view, education aims to perpetuate the cultural heritage, to establish a social order which is in conformity with the cultural heritage as well as to meet the needs and aspirations of people. From

the psychological point of view, education aims to develop physical (conative), mental (cognitive) and emotional (affective) characteristics.

1.10.1 Philosophical Foundation of Curriculum

Philosophical foundations may be defined as the elements of philosophy which have a bearing on the choices made in regard to the purposes, methods and content of the school.

The function of philosophy can be conceived as either 1) the base or starting point in curriculum development or 2) an interdependent function with other functions in curriculum development.

John Dewey contended that a philosophy may be defined as "the general theory of education and that the business of philosophy is to provide the framework for the aims and methods of schools". According to him education is the laboratory in which philosophic distinctions become concrete and are tested.

The philosophies have influenced education to a considerable degree. Philosophy gives meaning to our decisions and actions. John Dewey viewed philosophy as the all-encompassing aspect of the educational process - as necessary for forming fundamental dispositions, intellectual and emotional, toward nature and fellow man.

i. Idealism

According to idealism a belief is true when it is logically consistent with the rest of our belief. Idealism is the based on Coherence theory of truth. According to this theory truth is coherence within our experience.

Idealism adheres to principles of the priority of consciousness. This principle reveals that the idealist accords primacy to mind over matter. Thus, the totality of the universe is spirit in essence.

The idealists subscribe to the doctrine of a latent and preordained harmony between men and universe. To know is to rethink the latent ideas that are already in the mind.

Idealistic curriculum reflects the cultural heritage and civilization of the whole human race. Plato advocates three types of activities i.e. intellectual, aesthetic and moral for the attainment of ideals of life i.e. truth, beauty and goodness. He stresses language, literature, history, geography, maths, science for

intellectual activity. He emphasizes arts and poetry for aesthetic activity. He assigned religion, metaphysics and ethics for moral activities. Nunn advocates the inclusion of physical culture, sociology, ethics and religion for physical, social, moral and religious activities. He emphasizes literature, art, music, handicraft, history, geography, science and maths for literary and aesthetic activities. In brief, the idealistic curriculum places heavy emphasis on the world of our own mind and the subject-centred, curriculum and knowledge-based curriculum, consisting of classics or liberal arts.

ii. Naturalism

Naturalism advocates the selection of learning experience according to the present needs, interests and activities of the child. It insists that adult interference should be reduced to the minimum and that the child should grow up in the free atmosphere. Naturalists emphasises the child centred methods of teaching. They recommend proper motivation and effective use or illustrative aids to capture and maintain the child's interest in the lesson. They advocate perfect freedom for the child. They believe in discipline by natural consequences.

iii. Pragmatism

The pragmatist visualized the relationship between man and the world as one of perpetual (continuous) growth towards a dynamic equilibrium. The utility theory of truth is to the effect that truth is what worked in practice. It is based on change, process and relatively. It constructs knowledge as a process in which reality is constantly changing and rejects the dogmas of pre-conceived truths and external values. Pragmatic curriculum reflects practical utilitarian subjects. The curriculum designed based on the principle of utility, integration and child's personal needs, interests and experience. Curriculum must not exist apart from the social context. The pragmatism places heavy emphasis on broad-field curriculum, diversified curriculum, experience-centred curriculum, problem-based curriculum. In brief, the pragmatic curriculum is built on people's experiences and needs.

iv. Realism

Realism is a philosophy of common sense and science. The real world exists exclusive of the perception and interpretation of the perceiver (observer). The realist views the world in terms of objects and matter. People can come to

know the world through their senses and their reason. The nature and properties of material universe are being affected by being known (C.V.Good) Realism is based on the principles of independence and correspondence theory of truth or mirror theory of truth. Realistic curriculum reflects the material world, physical science and quantitative aspects of education. In realism the reality is more objective expression which is governed by natural laws and principles Realists usually associate it with a more material, machinelike universe. In the realist school, the theory is that the learner adjusts to or becomes aware of the scientific facts and laws of nature as the foundation of ultimate knowledge. The realist curriculum consists of the organized, separate subject matter of the physical world that classifies objects. Realism advocates the study of the law of nature and the accompanying universal truths of the physical world. Activities that require mastering facts and information on the physical world are significant aspects of realist methodology. According to realism, observable fact is the truth. Hence field trips, laboratories, audio-visual materials and nature are ingredients of methodology. Realistic curriculum placed heavy emphasis on knowledge-based, subject-centred curriculum with humanistic and scientific subjects.

v. Existentialism

Existentialism is a philosophical belief according to which the greatest philosophical problem is that of personal existence and that only positive social participation is the way to true morality. It is concerned more with the problem of becoming than the problem of being, more with particulars than universals; more with existence than essence. The existentialists have emphasized ‘action’ and choice instead of usual emphasis on knowledge and explanation and replaced the question of what by how. Existentialist placed heavy emphasis on completely individualized curriculum, consisting of human conditions, choices and life-situation. Existentialists emphasize the subjective knowledge of humanistic subjects rather than the objective knowledge of scientific subjects.

vi. Essentialism

Essentialism emphasizes academic subject-centred curriculum consisting of essential skills (three R's.) and essential subjects (English, science, history, math). Essentialism advocates fundamentals or mastery of essential skills and facts that form the basis of the subject matter.

vii. Progressivism

In progressivism, the focus of curriculum is based on students interests, involves the application of human problems and affairs; interdisciplinary subject matter; activities and projects. Progressivism placed heavy emphasis on activity-based curriculum relevant curriculum, humanistic curriculum and radical school reform or romantic curriculum.Very few schools adopt a single philosophy, in practice, most schools combine various philosophies. Curriculum workers need to provide assistance in developing and designing school practices that coincide with the philosophy of the school and community. Teaching, learning, and curriculum are all interwoven in our school practices and should reflect a school philosophy. It is important, then, for school people, especially curriculum, to make decisions and take action in relation to the philosophy of their school and community.

1.10.2 Psychological Foundation of Curriculum

Education has become child-centred in other words, it has been psychologised. Psychological foundation consists of the accumulated knowledge which guides the learning process and allows the teacher who is executing the curriculum to make intelligent decisions regarding the behaviour of the learner. The relationship between psychological foundations and curriculum has been analysed in the questions given below.

- Does the physiological development of the learner influence the curriculum?
- Does the age of the learner influence the curriculum?
- Does the mental development of the leaner affect the curriculum?
- Do problems of learner influence the curriculum?
- Do needs of the learner influence the curriculum?

There is only one answer for all these questions that is “yes”. In brief, psychology is concerned with a basic question – How do people Learn? That we are now formulating educational objectives in terms of the leaner’s behavioural changes is just one indication of how psychology is influencing educational thought and practice. Selection of curriculum content and its organisation are based on various theories of psychology such as the laws of learning (viz,. Law of readiness, law of exercise and law of effect: law of remembering and forgetting), theories of interest and attention, transfer of learning growth and development of physic and mental, intelligence, creativity and personality development. It is agreed by all that curriculum should be organised on the theories of learning and motivation and on the aptitudes and abilities of the learners. Curriculum makers should see if the curriculum they plan on a psychological basis by asking the following questions and conforming that the answers are positive;

- Is the curriculum designed keeping is view the needs and interest of the learners?
- Is it graded and sequenced according to the age and particular stage of the development of the learners?
- Is it flexible enough to make allowances for the individual differences among learners?
- Does it foster a sense of innovation and independent thinking in individuals besides the acceptances of group norms?
- Does it develop a realistic confidence besides tolerance to other’s views in the area of the learning?

1.10.3 Sociological foundations of Curriculum

The expectation and aspiration of a changing society are reflected through the educational system of a country. “The school” according to John Dewey, “must become the child’s habitant to be a miniature community, and embryonic society”. Education is process that takes place in society for society and by society. The changing nature of culture aspect has its impact on education. Education has to adjust itself to the changing situations. Or else it will be isolated from life; in short, it will remain unrealistic, useless and meaningless.Society by dynamic, it grows and changes and as such these

social changes must not only be reflected in education but also be influenced by it. Changes occur in the cultural sphere and every sector of natural life. Curriculum is relevant, should take out of these changes and promote desirable changes in the learners.

Check Your Progress 3

Notes: a. Write your answers in the space given below.
b. Compare your answers with those given at the end of this unit.

1. Define the term 'Curriculum'.

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2. What are the natures of Curriculum?

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3. Write any five needs for curriculum.

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4. What are the major foundations of Curriculum development?

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1.11 LET US SUM UP

Curriculum is the instructional and the educative programme by following which the pupils achieve their goals, ideals and aspirations of life. Nature of curriculum should be the instructional programme as indicated by the course offerings to meet the requirements of a vast heterogeneous population; the courses of study, embodying outlines of knowledge to be taught; all the experiences provided under the guidance of the school. On the other hand, Nature of curriculum is that which makes a difference between maturity and immaturity, between growth and stasis, between literacy and illiteracy, between sophistication (intellectual, moral, social and emotional) and simplicity. It is the accumulated heritage of man's knowledge filtered through the prisms of contemporary demands and pressures. It is that wisdom considered relevant to any age in any given location. It is that we choose from our vast amount of heritage of wisdom to make a difference in the life of man. Scope of curriculum relates to what should be taught or learned. And it refers

to the breadth of the curriculum- the content, learning experiences and activities to be included in the curriculum. The curriculum should integrate: Cognitive, affective and psychomotor objectives and abilities, Knowledge and experience, Objectives and content, and Child's activity and needs with the society needs and activity. It should be related to the social environment of the students. Also, there should different modes of educations with their determined curriculum developments have to be noted so as to satisfy the different foundations of curriculum and thereby they could be adopted in multicultural classroom settings. Hence, there should be a great effort have to be taken to frame such a curriculum development process before execute the process of teaching in all levels and modes of education.

1.12 UNIT END ACTIVITY

2. Enlist the different types of institutions with different modes of education in your city.
3. Compare and contrast the rules and regulations followed in different modes of education for their admission process.

1.13 POINTS FOR DISCUSSION

1. Explain the concept of knowledge and forms of knowledge with the examples.
2. Explain the following terms:
   - Knowledge
   - Instruction and
   - Teaching
3. Explain and elaborate the modes and needs of different modes of education.
4. How can you execute an effective teaching in multicultural setting classroom?
5. Compare and contrast the concept of curriculum and syllabus.
6. Elaborate the determinants of curriculums with the examples.
7. Explain the curriculum development in accordance with different foundations of curriculum.

1.14 ANSWERS TO CHECK YOUR PROGRESS

Check Your Progress 1

1. Sources of knowledge are:
    - Sense Experience Empirical Knowledge
    - Reason Rational Knowledge
    - Experimentation
    - Authority
    - Intuition
    - Revealed Faith Knowledge
2. Ways to acquiring knowledge are:
    - Observation and Experience
    - Reason / Logic
    - Revelation

Check Your Progress 2

1. Education which is controlled and planned consciously by the state or its designed agency such as the school with certain specific objectives is formal education. In such a system of education there are rigid rules of age of admission, content and duration of courses, procedures of examination, selection of elective subjects' etc. Schools, colleges, technical institutions, and universities are offering formal education (face to face).
2. Ways to impart non-formal education:
    - Open University
    - Open and Distance Learning
    - Distance Education
3. Five popular reasons to admit Open University programmes:
    - Open learning permits students to learn and earn at the same time.
    - It offers a range of flexibility in respect of what to learn, when to learn, how to learn and where to learn.
    - Video and audio facilities are support the courses
    - There are fewer constraints, fewer rules and regulation and greater learning autonomy.
    - There are no geographical and background barriers to admission and learning

4. Main objectives of Distance Education are:
    - To disseminate learning and knowledge by diversity of means
    - To provide a chance who those who could not go the conventional system
    - To improve the quality and standard of education
    - To provide lifelong education for working people and housewives
    - To provide opportunity for higher education to a large population
    - To promote the educational standard
    - To coordinate and determine the standards of education of the country

Check Your Progress 3

1. Curriculum is a tool in the hands of the artist (the teacher) to mould his material (the pupil) according to his ideal (objective) in his studio (the school). The material is highly self active, self-determining human being who reacts and responds consciously (Cunningham).
2. Nature of Curriculum
    - Curriculum as a Plan
    - Curriculum as an Experience
    - Curriculum as a Subject Matter
    - Curriculum as an Objective
    - Curriculum as a System
    - Curriculum as a Field of Study
3. Five needs of curriculum are:
    - The good citizens are prepared by the developing democratic way of life.
    - The ability of the self- realization is also developed by education and to make good man.
    - It develops the feeling of appreciation and sound judgment; it also prepare for scientific invention and technical development.
    - It brings performance in child; it helps in all-round development.
    - It is a powerful instrument for social change and social control
4. Major foundations of Curriculum development are:
    - Philosophical Foundation
    - Psychological Foundation
    - Sociological Foundation

UNIT: II CURRICULUM AND DEVELOPMENT

Structure

2.1 INTRODUCTION

Curriculum is that which the pupil is taught. It involves more than the act of learning and quiet study. It involves occupations, productions, achievement, exercise, and activity. The term curriculum is derived from the Latin word 'currere', which means path. In the sense, curriculum is the path through which the student has to go forward in order to reach the goal envisaged by education. Usually the term curriculum is understood as a group of subject prescribed for study in a particular course. Thus, the term curriculum in recent years has come to mean all the planned activities and experiences available to the student under the direction of the school. Curriculum is dynamic and changes according to the needs of the pupil and society. Curriculum should stand for all the experiences that can be included in the study of a particular subject which are thought to be essential for the realization of the set goals or objectives of that subject and it is essential for teachers and educational administrators to design and organize the curriculum according to the flexible tests of the pupils. This unit will discuss about the principles of curriculum development, types of curriculum along with the theories associated with the construction of curriculum. Also, you will understand how the curriculum could be framed according to different levels. At the end, the syllabus of CBSC and State board are discussed along with the curriculum reforms in India in detail.

2.2 OBJECTIVES

After going through this unit, you will be able to:

- Understand the meaning and concept of curriculum development
- Comprehend the principles of curriculum development
- Classify the types and stages of curriculum development
- Acquaint the theories of curriculum development
- Compare the syllabus of CBSC and State Board
- Understand the need of Curriculum Reforms in India

2.3 CURRICULUM DEVELOPMENT

"Curriculum embodies all the experiences, which are utilized by the school to attain the aims of education" (Munroe). The curriculum development is to show how curriculum evolves or is planned, implemented, and evaluated, as well as what various people, processes, and procedures are involved in constructing the curriculum. Such development is usually examined in a logical step-by-step fashion based on behavioural and managerial approaches to curriculum and rooted in scientific principles of education.

Saylor et al, outline a concise four step planning model, which includes:

i. Goals and Objectives,
ii. Curriculum Design (or specifications),
iii. Curriculum Implementation (or instruction) and
iv. Curriculum Evaluation

Unruch and Unruch outline five development steps:

i. Goals and Objectives
ii. Needs Assessment
iii. Content
iv. Implementation, and
v. Evaluation

Francis Hunkins has designed a seven step model:

i. Curriculum conceptualization and legitimization
ii. Curriculum Diagnosis
iii. Content Selection
iv. Experience Selection
v. Curriculum Implementation
vi. Curriculum Evaluation And
vii. Curriculum Maintenance

It is concluded that curriculum development is the organized preparation of whatever is going to be taught in schools at a given time in a given year. They are made into official documents, as guides for teachers, and made obligatory by provincial and territorial departments.

2.3.1 Concept of Curriculum Development

i. Curriculum as a Plan

- Oliva (1982) stated that "Curriculum is a plan or programme for all experiences which the learner encounters under the direction of the school."
- Carter V. Good (1959) defined curriculum as "a general overall plan of the content or specific materials of instruction that the school should offer the student by way of qualifying him for gradation on certification for entrance into a professional or a vocational field."
- Tyler and Hilda Taba (1962) defined curriculum "as a plan for action, or a written document, which includes strategies for achieving desired goals or ends."
- Galen Saylor defined curriculum "as a plan for providing sets of learning opportunities for persons to be educated".
- David Pratt (1980) defined "curriculum as an organized set of formal educational and/or training intensions".
- Wiles and Bondi stated that "curriculum as a plan for learning whereby objectives determine what learning is important".
- West Burg, and Steimer, (1971) told that curriculum is a methodological inquiry exploring the range of ways in which the subject-matter elements of teacher, students, subject and milieu can be seen. Curriculum can be defined as "a plan for providing sets of learning opportunities to achieve broad gods and related specific objectives for an identifiable population served by single school centre. Thus curriculum can be regarded as anticipatory or indented."
- West Burg and Steimer (1971) Saylor and Alexander (1956) defined curriculum as the sum total effort of the school to bring about desired outcomes in school and out of school situations. According to them the curriculum includes school experiences through which learners may achieve the ends sought by their teachers."

- Jenkin and Shipman (1975) stated that "A curriculum is the formulation and implementation of an educational proposal, to be taught and learnt within schools or other institutions and for which that institution accepts responsibility at three levels: its rationale, its actual implementation and its effects"
- In the words of Kerney and Cook, "curriculum is a complex of more or less planned or controlled conditions under which students learn to behave and to behave in their various ways. In it, new behaviour may be acquired, present behaviour may be modified, maintained or eliminated, and desirable behaviour may become both persisted and viable".

ii. Curriculum as an Experience

- Tanner & Tanner (1980) defined that "Curriculum is that reconstruction of knowledge and experiences systematically developed under the auspices of the school (or university) to enable the learner to increase his or her control of knowledge and experience."
- The Secondary Education Commission (1952-54) stated that "curriculum includes totality of experiences pupil receives through the manifold activities that go on in the school, classroom, library, laboratory, workshop, play ground and in numerous informal contacts between teachers and pupils." In other words the whole life of school is curriculum which can touch the life of students at all levels and helps in evolution of a balanced personality.
- According to Crow and Crow, "curriculum includes all the learners experiences in and outside the school that are included in a programme which has been devised to help to develop mentally, physically, emotionally, spiritually and morally."
- Franklin Bobbit (1918) defined that "Curriculum is that series of things which children and youth must do and experience by way of developing abilities to do the things well that make up the affairs of adult life; and to be in all respects of what adults should be" .

- Krug (1957) stated that "Curriculum consists of all the means of instruction used by the school to provide opportunities for student learning experiences leading to desired learning outcome."
- Saylor & Alexander (1966) defined as "Curriculum encompasses all learning opportunities provided by the school."
- Harnack (1968) defined that "Curriculum embodies all the teaching learning experiences guided and directed by the school".
- Smith *et al.,* (1957) defined "curriculum as a sequence of potential experiences set up in school for the purpose of disciplining children and youth in group ways of thinking and acting."
- Foshay (1969) defined that "curriculum encompasses all experiences a learner has under the guidance of the school".
- Tanner, D and Tanner L.N. (1975) defined 'curriculum as the planned and guided learning experiences and intended learning outcomes, formulated through the systematic reconstruction of knowledge and experience, under the auspices of the school for the learner's continuous and wilful growth in personal social competence.
- John Dewey defined that "curriculum as dealing with the experiences of the learners. This view considers almost anything in school, even outside of school as part of the curriculum".
- Caswell and Campbell defined curriculum as "all the experiences children have under the guidance of teachers."
- Shepherd and Ragan stated that "the curriculum consists of the ongoing experiences of children under the guidance of the school". It represents a special environment…. for helping children achieve self-realization through active participation within the school.
- Eisner points out that the curriculum "is a program the school offers to its students". It consists of a "pre-planned series of educational hurdles and an entire range of experiences a child has within the school."
- Glen Hass (1987) contended that "curriculum is all of the experiences that individual learners have in a programme of education whose purpose is to achieve broad goals and related specific objectives, which is planned in terms of a framework of theory and research or past and

present to professional practices." The curriculum is thus a list of planned learning experiences offered to the students under the direction of the school, in other words, curriculum is a blueprint of experiences that have been planned for the students.

iii. Curriculum as a Subject Matter

Doll (1978) stated that Curriculum is both a subject to be taught at colleges and universities and a field in which practitioners work. Curriculum is the formal and informal content and process by which learners gain knowledge and understanding, develop skills and alter attitudes, appreciations and values under the auspices of that school." Curriculum can be considered in terms of subject matter (Tamil, English, Mathematics, Science, and Social Science) or content (the way of organization and assimilation of information). Historically and currently the dominant concept of the curriculum is that of subjects and subject matter there in to be taught by teachers and learned by students. Curriculum refers to the set of subjects or course offered and also those required or recommended or grouped for other purposes; thus such terms as the college 'preparatory curriculum' 'science curriculum' and 'premedical curriculum' are commonly used. According to Beanchamp, the subject matter is the hard core of curriculum whatever may be the mode of expression. The list of subjects offered in a particular grade or school is frequently referred to as the curriculum. More properly, the subject offering of the schooled is the program of studies.

The curriculum is the school's total program for learners. Generally we find that the concept for the curriculum is that of subjects and subject matter taught by teachers and given in the text books. In spite of efforts made in the improvement of the concept of the curriculum for last 50 years, the concept of curriculum as subjects matter continues to the basis of the dominant curriculum design. The concept of curriculum as subject and subject matter has been presented in the theories relating to principles for selections, sequence and class placements of subject matter. This concept of curriculum follows the following procedure for curriculum planning:

- Various social and educational factors are taken into account by curriculum experts to decide the subject to be taught to a particular age group.
- Interests of the students, difficulty of their age group and sequence are used as criteria to decide the subjects and subject matter to be taught to the students belonging to a particular age group and particular area of location.
- Methods of teaching are planned and implemented for the purpose of providing mastery of knowledge as subject matter of the subjects selected in curriculum.

But in the modern days this concept of curriculum is not considered appropriate because it restricts the concepts of curriculum to the fields of organized knowledge.

iv. Curriculum as an Objective

- B.F. Skinner views the curriculum as being formulated according to behaviouristic objectives. The curriculum is the series of experiences which children and youth must have by way of attaining activity-based objectives.
- W. W. Chatters (1923) viewed curriculum as a series of objectives that students must attain by way of a series of learning experiences
- Edgar Bruce state that the curriculum is "an educational instrument, planned and, used by the school to effect the purposes".
- According to Payne, "curriculum consists of all the situations that schools may select and consciously organise for the purpose of developing the personality of its pupils and for making behaviour changes in them."
- Bobbit (1918) has defined curriculum "that series of things which children and youth must do and experience by way of developing abilities to do the things well that make up the affairs of adult life: and to be in all respects of what adults should be". Here Bobbit determined curriculum objectives based on skills and knowledge needed by adults.
- Ralph Tyler (1949) has presented the same views about the curriculum but he combined curriculum and instruction in his approach. Probably

he thought that curriculum and instruction cannot be separated otherwise the aims and objectives of curriculum planning will not be attained.

- Muritsz Johnson (1971) stated that "curriculum is concerned not with what students will do in the learning situation but with what they will learn (or be able to do) as a consequence of what they do. Curriculum is concerned with what results, not with what happens. And it stands in anticipatory relationship to the learning process, not in a reportorial relationship, after the fact. It deals with expectations or intentions and more specifically with the learning outcomes intended to be achieved through instruction that is through experiences provided through what happens and what learners do".
- The curriculum is the sum total of the school's efforts to influence learning, whether in the classroom, on the playground or out of school.
- A curriculum is a structured series of intended learning outcomes (Johnson, 1967). This explanation emphasizes that learning outcomes and not learning experiences constitute the curriculum. These outcomes are linked with objectives.
- Lawrence Stenhouse (1975) stated that 'A curriculum is an attempt to communicate the essential principles and features of an educational concept in such a form that it is open to critical scrutiny and capable of effective translation into practice'. Here, curriculum has been viewed as an attempt, an activity aimed at communication.

v. Curriculum as a System

Babcock, McNeil and Tanners stated that "Curriculum can be considered as a system for dealing with people and the processes or organization of personnel and procedures for implementing the system"

vi. Curriculum as a Field of study

Orlosky and Smith, Schubert and Tanners stated that "Curriculum can also be viewed as a field of study, comprising its own foundations and domains of knowledge, as well as its own research, theory, and principles".

2.4 BASIC PRINCIPLES OF CURRICULUM

Curriculum refers both organized and informal activities of school life. School life need not imply life of the child within the four walls of the school alone, but extends beyond that. The place and importance of the curriculum in the educative process needs no reemphasis. The general aims of education receive concrete expression through the curriculum. It translates ideals into action. It is the crucial link between objectives and outcomes. As King and Brownell write "Deliberately Designed activity of life is education, deliberately designed portion of education is schooling, the heart of schooling is curriculum." The following are the basic principles of Curriculum Development

- The curriculum should be Productivity Oriented.
- The curriculum should be Activity Based.
- The curriculum should be New Knowledge Oriented The curriculum should be Child-Centered
- The curriculum should be Human Development Oriented
- Principle of Conservation
- Principle of Forward Looking
- Principles of Creativity
- Principle of Flexibility
- Principle of Maturity
- Principle of Utility
- Principle of Totality
- Principle of Significance
- Principle of LPG (Liberalization, Privatization and Globalization)
- Principle of Values

2.4.1Need and Importance of Curriculum Development

The need and importance of curriculum development are stated as:

- Achievement of educational Aims
- Criteria of appropriate Teachers
- Selection of appropriate Methods

- Reflects trends in Education
- Providing Appropriate Knowledge
- Providing Appropriate Activities and Experiences
- Providing Wholesome Influences

Curriculum is a means to achieve the aims of education which are dynamic and go on changing with the changing social requirements. Naturally, the curriculum will reflect the trends in education. Hence, Curriculum should include suitable knowledge which will help in the achievement of aims of education**;** it includes well selected activities and experiences needed for the development of pupils according to social requirements; it should provide wholesome school programme to develop the desirable behaviour patterns in the pupils.

2.5 TYPES OF CURRICULUM

The types of curriculum can be broadly presented as:

2.5.1 Subject-Centered Curriculum

This model focuses on the content of the curriculum. The subject-centered design corresponds mostly of the textbook, written for the specific subject. Henry Morrison and William Harris are the few curricularists who were firm believers of this design. In this instance, schools divide the school hours to different subjects such as reading, grammar, literature, mathematics, science, history and geography. Examples of subject- centered curriculum are included below:

- **Subject Design: '**What subjects are you teaching? What subjects are you taking?' These sample questions to which the teacher and the learner can easily give an answer. It is so because they are familiar with the subject design curriculum. Subject design curriculum is the oldest and so far the most familiar design for teachers, parents and other laymen. According to the advocates, subject design has an advantage because it is easy to deliver. Complementary books are written and support instructional materials are commercially available. Teachers are familiar with format, because they were also educated using the design. However, the drawback of this design is that

sometimes learning is so compartmentalized. It stresses so much the content that it forgets about students' natural tendencies, interests and experiences. The tendency of the teacher is pour in so much content to the learner so that the students become simply the empty vessel that receive the information or content.

- **Discipline Design:** This curriculum model is related to the subject design. However, while subject design centers only on the cluster of content, discipline design focuses on academic disciplines. Discipline refers to specific knowledge learned through a method which the scholars use to study a specific content field. Students in history should learn how biologists learn, and so with students in mathematics should learn how mathematician learn. In the same manner, teachers should teach how the scholars in the discipline will convey the particular knowledge. The discipline design model of curriculum is often used in college, but not in the elementary or secondary levels. So from the subject-centered curriculum, curriculum moves higher to discipline when the students are more nature and are already moving towards their career path or disciplines as science, mathematics, psychology, humanities, history, and others. Discipline becomes the degree program.
- **Correlation Design:** This comes from core, correlated curriculum design that links separate subject designs in order to reduce fragmentation. Subjects are related to one another but each subject maintains its identity. For example, English literature and social studies correlate well in the elementary level. In the two subjects, while history is being studied, different literary pieces during the historical period are being studied. The same is true when science becomes the core; mathematics is related to it, as they are taken in chemistry, physics and biology. Another example is literature as the core and art, music, history; geography will be related to it. To use correlated design, teachers should come together and plan their lessons cooperatively.

- **Broad Field Design / Interdisciplinary:** Broad field or interdisciplinary design is a variation of the subject-centered design. This design was made to prevent the compartmentalization of subjects and integrate the contents that are related to each other. Thus subjects such as geography, economics, political science, anthropology, sociology and history are fused into one subject called social studies. Languages are will include grammar, literature, linguistics, spelling and composition.

2.5.2 Learner-Centered Curriculum

Among the progressive educational psychologists, the learner is the center of the educative process. This emphasis is very strong in the elementary level, however more concern has been placed on the secondary and even the tertiary levels. Although in high school, the subject or content has become the focus and in the college level, the discipline is the center, both levels still recognize the importance of the learner in the curriculum. Here are some examples of the learner-centered designs.

- **Child-Centered Design:** This design is often attributed to the influence of John Dewy, Rouseau, Pestallozi and Froebel. The curriculum design is anchored on the needs and interests of the child. The learner is not who engages with his/her environment. One learns by doing. Learners actively create; construct meanings and understanding as viewed by the constructivists. In the child-centered design, learners interact with the teachers and the environment, thus there is a collaborative effort on both sides to plan lessons, select content and do activities together. Learning is a product of the child's interaction with the environment.
- **Experience-Centered Design:** This design is similar to the child-centered design. Although, the child remains to be the focus, experience-centered design believes that the interests and needs of learners cannot be pre-planned. Instead, experiences of the learners become the starting point of the curriculum, thus the school environment is left open and free. Learners are made to choose from various activities that the teacher provides. The learners are

empowered to shape their own learning from the different opportunities given by the teacher. In a school where experience-centered curriculum is provided, different learning centers are found, time is flexible and children are free to make options. Activities revolve around different emphasis such as touching, feeling, imagining, constructing, relating, and other. The emergence of multiple intelligence theory blends well with experience-centered design curriculum.

- **Humanistic Designs:** The key lead personalities in this curriculum design were Abraham Maslow and Carl Rogers. Maslow's Theory of self-actualization explains that a person who achieves this level is accepting of self, others and nature; is simple, spontaneous and natural; is open to different experience; possesses empathy and sympathy towards the less fortunate, among many others. The person can achieve this state of self-actualization later in life but has to start the process while still in school. Carl Rogers, on the other hand, believed that a person can enhance self directed learning by improving self understanding and basic attitudes to guide behavior. In a humanistic curriculum, the development of self is the ultimate objective of learning. It stresses the whole person and the integration of thinking, feeling and doing. It considers the cognitive, affective and psychomotor domains to be interconnected and must be addressed in the curriculum. It stresses the development of positive self-concept and interpersonal skills.

2.5.3 Problem-Centered Curriculum

Generally, problem- centered design draws on social problems, needs, interest and abilities of the learners. Various problems are given emphases. There are those that center on life situations, contemporary life problems, areas of living and many others. In this curriculum, content cuts across subject boundaries and must be based on the needs, concerns and abilities of the students. Two examples are given for the problem- centered design curriculum.

- **Life-Situations Design**: What makes the design unique is that the contents are organized in ways that allow students to clearly view problem areas clearly. It uses the past and the present experiences of learners as a means to analyze the basic areas of living. As a starting point, the pressing immediate problem of the society and the students' existing concerns are utilized. Based on Herbert Spencer's curriculum writing, his emphases were activities that sustain life, enhance life, aid in rearing children, maintain the individual's social and political relations and enhance leisure, tasks and feelings. The connection of subject matter to real situations increases the relevance of the curriculum.
- **Core Design**: Another example of problem- centered design is core design. It centers on general education and the problems are based on common human activities. The central focus of the core design includes common needs, problems, and concerns of the learners. Popularized by Faunce and Bossing in 1959, they presented ways on how to proceed following a core design of a curriculum as follows:
    - ❖ The problem is selected by either the teacher or students
    - ❖ A group agreement is made to identify the important problems and interest of the class
    - ❖ Problems are selected on the basis of developed criteria
    - ❖ The problem is clearly stated and defined
    - ❖ Areas of study are decided, including dividing the class
    - ❖ Needed information is listed and discussed
    - ❖ Resources for obtaining information are listed and discussed
    - ❖ Information is obtained and organized
    - ❖ Information is analyzed and interpreted
    - ❖ Tentative conclusions are stated and tested.
    - ❖ A report is presented to the class on an individual/group Conclusions are evaluated
    - ❖ New avenues of exploration toward further problem solving are examined

2.5.4 Core Curriculum

The term core assumes many meanings. Traditionally includes all required content areas in the school programme. More recently, the term “core” refers to type of course such as general education, united studies, common learning, social living and integral programmes. Regardless of the term that is employed in the school the two ideas common to the concept of core are that they provide experiences needed by all youth and the experiences cut across subject lines. The core curriculum deals problems of persistent and recurring deal with youth and of society irrespective of subject matter lines from martial may be down for the solution of the problems. Experiences have shown that “core” should occupy only portion of the school day.

Objectives of Core Curriculum

The following are the Objectives stated as:

- To provide a youth a common body of experience organized around personal and social problems,
- To give boys and girls successful experience in solving the problem which are real to them here and now, thus preparing them to solve future problems,
- To give youth experience which will lead them to become better citizens in a democracy
- To increase the holding power of the secondary school by providing a program that has meaning for all, these are some of the needs of the core curriculum.

Characteristics of Core Curriculum

- Core Curriculum utilities the problems of personal and social development common to all youth.
- It develops these problems without reference to the traditional subject matter fields.
- It encourages the use of the problem- solving technique to attack problems. These core issues are problems not topics of subject matter.
- It requires a wide variety of techniques and materials for their development
- There is a provision for individual and group guidance

- It provides for a scheme of organizing around the core the majority of the teachers of the school in relation to dominant central purpose that of the school programme around individual interests and purpose of supplementing the core work

2.5.5 Hidden/ Latent Curriculum

A hidden curriculum can be defined as the lessons that are taught informally, and usually unintentionally, in a school system. These include behaviors, perspectives, and attitudes that students pick up while they are at school. This is contrasted with the formal curriculum, such as the courses and activities students participate in. A hidden curriculum is a side effect of an education which are learned but not openly intended" such as the transmission of norms, values, and beliefs conveyed in the classroom and the social environment. Any learning experience may teach unintended lessons. Areas of hidden curriculum in our schools that mold perspectives of students deal with issues such as gender, morals, social class, stereotypes, cultural expectations, politics, and language. Hidden curriculum is often found within the formal curriculum of a school; this may be partially in what is not taught. Various aspects of learning contribute to the success of the hidden curriculum, including practices, procedures, rules, relationships, and structures. Many school-specific sources, some of which may be included in these aspects of learning, give rise to important elements of the hidden curriculum. These sources may include, but are not limited to, the social structures of the classroom, the teacher's exercise of authority, rules governing the relationship between teachers and students, standard learning activities, the teacher's use of language, textbooks, audio-visual aids, furnishings, architecture, disciplinary measures, timetables, tracking systems, and curricular priorities. Although the hidden curriculum conveys a great deal of knowledge to its students, the inequality promoted through its disparities among classes and a social status often invokes a negative connotation. Since the hidden curriculum is considered to be a form of education-related capital, it promotes this ineffectiveness of schools as a result of its unequal distribution. As a means of social control, the hidden curriculum promotes the acceptance of a social destiny without promoting rational and reflective consideration. Although the

hidden curriculum has negative connotations, it is not inherently negative, and the tacit factors that are involved can potentially exert a positive developmental force on students. Some educational approaches, such as democratic education, actively seek to minimize, make explicit, and/ or reorient the hidden curriculum in such a way that it has a positive developmental impact on students.

Today, it is considered that the social development of students are important as well as cognitive development and proving social development they give importance to a second curriculum, including social and cultural features of school, rather than formal curriculum. Except from the curriculum which is written at school, this curriculum is referred to as a second curriculum and referred to names such as 'the hidden curriculum', 'secret curriculum', 'stored curriculum or 'non-written curriculum', but it does not provide a clear and distinctive elements of the official curriculum for students, such as feelings, values, attitudes and habits of the official curriculum of the correct knowledge is stated to be more effective (Yüksel, 2004). Within the context of hidden curriculum, it is suggested that elements like social class of the students that they come from and their academic achievement levels, social and academic life in schools, interactions between school and the environment, management and organizational preparations of the school, position of the teacher and the students in classroom and school environment should be properly taken into account during the process of character education.

2.5.6 Null Curriculum

The 'Null', or 'excluded' curriculum is a concept that was formulated by Elliot Eisner (1979). Eisner suggests that all schools are teaching three curricula: the explicit, the implicit, and the null. The explicit curriculum simply refers to publicly announced programs of study-what the school advertises that it is prepared to provide. Such a program typically includes courses in mathematics, science, social studies, English, art, and physical education. The implicit curriculum, on the other hand, includes values and expectations generally not included in the formal curriculum, but nevertheless learned by students as part of their school experience.

The null curriculum Eisner defines as what schools do not teach: " ... the options students are not afforded, the perspectives they may never know about, much less be able to use, the concepts and skills that are not part of their intellectual repertoire" (1985, p. 107). Like many terms used in the curriculum field, 'the null curriculum' is a multi-faceted concept. Eisner himself identifies two major dimensions of the null curriculum: intellectual processes and subject matter. These two dimensions may be supplemented by a third, that of affect. Null content can also consist of subfields within a discipline. Topics within sub-fields represent yet a more specific level at which we may identify components of null content. The concept of evolution omitted from a biology curriculum would be an example of this type of exclusion. Null content can be considered in terms of particular facts. Pelletier also observes the existence of the null curriculum: "what is not taught, addressed, or even mentioned in education." Here Pelletier is thinking particularly of the implications of not teaching philosophy. However, what she has to say about the null curriculum applies to other subject areas, conspicuous for their absence.

Potentials of Null Curriculum

- Visual and Performance of Arts
- Relationship and sexuality
- Contraceptive method
- Conservational second language
- Home economics
- Carpentry and Industry Arts
- Basic life skills

Contribution to Students

- Clear cultural and political statements about what is 'significant' in a society as made by excluding content
- Increased knowledge leads to increased understanding leads to increased acceptance leads to increased and more collaboration
- More than excluded culture/perspectives, null-curriculum can be expressed through excluded methods or modes of expressions
- Deeper understanding, more well-rounded students

Establishment of Null-Curriculum

- Teacher will attempt to avoid conflict by skipping over controversial topics
- Administrators can made a decisions to serve their own agencies
- Curriculum often serves to please parents' expectations and community standards

Check Your Progress 1

Notes: a. Write your answers in the space given below.
b. Compare your answers with those given at the end of this unit.

1. How can the concept of curriculum development stated?
   ……
   ……
   ……
2. Enlist any five important basic principles of Curriculum Development.
   ……
   ……
   ……
3. What are the designs prescribed by Learner-centered curriculum?
   ……
   ……
   ……
4. What will be the characteristics of Core Curriculum?
   ……
   ……
   ……

2.5.7 Curriculum Organization

i. Logical Organization

In the Logical type of organization of the Curriculum, the content or subject-matter is arranged in a Logical Sequence. It means the Chapters or Units are arranged in such a way from Simple to Complex or Easy to Difficult or Known to Unknown sequence. It is helpful to the pupils to understand a topic or unit based on the logical development of the previous unit which they learnt before.

ii. Psychological Organization

In Psychological organization of the Curriculum, the psychological faculties of the pupils such as intelligence, interest, aptitude, memory, etc. are given important. Hence, the subject-matter is arranged according to the suitability to the psychological level or talent of human being at that particular level.

iii. Spiral Organization

In the type of Spiral organization of the Curriculum, the content of the Curriculum from the first grade till the last grade are arranged in such a way that the first grade the area covered is very small, in the next grade, it is larger than the first level. And thus, for the next grade, it will cover the information more for the content and it will continue up to the largest areas covered for that particular concept or event related to the grade or standard. In all the grades or standards, the subject-matter though increases in area coverage is continuously continues and have what is covered earlier will always have a bearing later.

iv. Concentric Organization

In this organization, the content of Curriculum is arranged in increasing area from the first grade till the last. In contrast to Spiral type organization, there is no continuity between the different grades. In this, first grade a smaller area is covered in detail; in the second grade, a brief recapitulation of the first grade content is followed by a detailed coverage of the higher area. In the third grade, next higher area is covered after a very brief recapitulation of both the earlier areas. This way the organization is arranged. It may be noted that the area of the first grade finds superimposition on all grades. Thus, every grade will have the superimposition of all the earlier grades.

v. Unitary Organization

In this Unitary type of Curriculum organization, the subject-matter for the entire course is conveniently classified into different units and discussed fully only once in some grade or other. Thus, the content or topics taken in any grade, it cannot be repeated in any other next grade.

vi. Topical Organization

In this Topical type Curriculum organization, the subject-matter whether under one unit or another is not identified unit-wise but discussed topic-wise if it is relevant to a topic selected.

vii. Whole to Part Organization

In this Whole to Part Curriculum organization, the approach is deductive in nature. Sometimes, the approach may be analytical. Here, from a general or whole conception to the fragmented constituent parts are discussed.

viii. Part to Whole Organization

In this Part to Whole Curriculum organization, the approach selected for this organization is inductive and sometime it may be synthetic with respect to the standard or grade. Here, from individually observed similar or complementary phenomena the observation is extrapolated or completely perceived to discuss the whole nature.

Check Your Progress 2

Notes: a. Write your answers in the space given below.
b. Compare your answers with those given at the end of this unit.

1. What are the three types of curriculum teaching in school level?
   ……..
   ……..
   ……..
2. What is meant by 'spiral organization of curriculum'?
   ……..
   ……..
   ……..

2.6 THEORY OF CURRICULUM

Curriculum theory is a set of related statements that gives meaning to a school's curriculum by pointing up the relationships among its elements and by directing its development, its use, and its evaluation (Beauchamp, 1981). Theory explains reality: it makes people aware of their world and its interactions. Many writers have ascribed four functions to theory as:

i. Description
ii. Prediction
iii. Explanation
iv. Guidance

In the case of curriculum theory, the subject matter involves decision about the use of a curriculum, the development of curriculum, curriculum design, curriculum transaction and curriculum evaluation. There are many theories and theoretical constructs to examine, depending on the author's knowledge and interpretation of curriculum. There are two major categories of curriculum theories-design theories and engineering theories. Design theories address the basic organization of the curriculum plan. For this, experts of curriculum draw on philosophy as well as on social and psychological theory. Design theories of curriculum content are influenced by various theories of knowledge. Engineering theories explain, describe, predict, or even guide curriculum development activities. They involve specific plans, principles, and / or methods or procedures. Engineering theories of curriculum are also partially based on principles of measurement and statistics. The task of curriculum theorizers is to theorize about the many dimensions of curriculum. They can theorize about the total curriculum field; where the field is going and why-its overall dynamics. Or, they can theorize on a micro level-about various elements or aspects of curriculum-say curriculum design, curriculum development, or curriculum evaluation whether they approach the field of curriculum in its totality or they break it down into its major elements, a diversity of approaches exists that depend on the 'mind-sets' they bring to the inquiry.

Curriculum theory and theorizing may be characterized as being a rather formative condition, for essentially there are no generally accepted and clear-cut criteria to distinguish curriculum theory and theorizing from other forms of writing in education. The present situation may be summarized by saying that curriculum theory and theorizing exists because a fair number of thoughtful and respected professional persons say they do it and that it exists. Still others refer to the work of these persons as theorizing and their efforts as theories. A reasonably knowledgeable look at the curriculum 'situation' readily reveals some of the problems which create the present confusion. To begin with, one would suspect that theory would be focused upon a clearly identified realm of phenomena. Unfortunately, this is not so in curriculum for the definitions of curriculum are as narrow as 'the subject matter to be learned' and as broad as "all the experiences students have in school'. Thus, writings called curriculum

theory have varied on one pole from essentially epistemological statements to the other pole of statements of a 'philosophy of living'.

Any piece of curriculum theory must be looked at carefully as a specific piece of theorizing in order to assess its intent. Huebner offers an analysis of theoretical statements which is of considerable interest here and he finds that there are six kinds of language used:

i. Descriptive
ii. Explanatory
iii. Controlling
iv. Legitimizing,
v. Prescriptive,
vi. Affiliative

This technical model has been developed to its greatest sophistication by vocational education workers. An excellent recent 'state of the art' review was edited by Smith and Moss who summarize the process as:

i. Specifying the role for which training is to be provided
ii. Identifying the specific tasks that comprise the role
iii. Selecting the tasks to be taught
iv. Analyzing each of the tasks
v. Stating performance objectives,
vi. Specifying the instructional sequence
vii. Identifying conditions of learning
viii. Designing an instructional strategy
ix. Developing instructional events and
x. Creating student and curriculum evaluative procedures and devices

For all intents and purposes this has been what has passed for the prevailing "theory" of most curriculum workers (with variations and alterations for different areas). Many curriculum theorists, however, have not found this to be a satisfactory model for a variety of reasons; perhaps most fundamentally because the technical process begins with an acceptance of contemporary social values (thus eliminating the value question of what to teach). Philosophies of education, according to Frankema are either analytical or normative. That is, they are essentially attempting to describe, discriminate, and establish meanings for terms, or they are essentially sets of statements

about what should or should not be included in education and what should or should not be done during the educational process. Curriculum theorists have found such neat categories difficult to parallel, since the concerns of curriculum at some times must be related to what is learned by persons. Thus, curriculum always has action implications with a broad directional concern for outcomes.

2.7 CURRICULUM FRAMEWORK

Curriculum framework is a plan that interprets educational aims, vis-à-vis both individual and society, to arrive at an understanding of the kinds of learning experiences schools must provide to children. This plan should include the foundational assumptions and basis of choice for experiences. Curriculum Frame work is one of the most important tools in ensuring consistency and quality in a 'curriculum system'. On the other hand it is stated as 'a document (or set of documents) that sets standards for curriculum and provides the context (available resources, capabilities of teachers and system support) in which subject specialists develop syllabi'. A curriculum framework is usually a single document which is supplemented by other materials to guide the implementation of specific parts of the framework. These may give more detailed specification or guidance by individual year, subject or learning area, addressing the requirements of the school system, individual schools and the classroom. The documents may include syllabi, programmes of study, year plans and lesson plans. They may be developed centrally, locally or by individual teachers, and may have the status of support material or official documents which must be used.

2.7.1 Common Elements of Curriculum Framework

- Current Context - it describes the social and economic environment in which educational policy is made and in which teaching and learning occur
- Educational Policy Statements describes the Government's goals for education, such as universal literacy and numeracy, the development of skills needed for economic prosperity and the creation of a stable and tolerant society

- Statement of Broad Learning Objectives and Outcomes /standards for each level / cycle describes what students should know and be able to do when they complete their school education. Outcomes should be expressed in a range of domains, including knowledge, understanding, skills and competencies, values and attitudes
- Structure of the Education System describes the school system within which the curriculum framework is to be applied. It should specify:
    - ❖ Number of years of schooling, including compulsory schooling
    - ❖ Stages (or cycles) of schooling and their durations
    - ❖ Number of weeks in the school years, hours / teaching periods in the school week
- Structure of curriculum content, learning areas and subjects and it describes the organization of content within the framework and the extent to which schools and students can make choices. It might describe:
    - ❖ The pattern of Subjects or Learning Areas to be studied in each stage or cycle (such as core, elective and optional subjects)
    - ❖ The number of hours to be assigned to each subject or Learning Area in each stage or cycle.
- Standards of resources required for implementation describes standards as they apply to:
    - ❖ Teachers – qualifications, teaching load (number of classes per week)• Students – number per class in each subject
    - ❖ Materials – textbooks, computers, other equipment; facilities – classrooms, furniture, fittings.
    - ❖ Teaching methodology describes the range of teaching approaches that might be employed in the implementation of the framework
- Assessing and reporting student achievement describes the importance of assessing the extent to which students achieve the outcomes of each subject, and recommends or prescribes types of assessment strategies (such as written, oral, performance and practical skills demonstration)

2.7.2 Principles of the Curriculum Framework

The Curriculum framework for schools is underpinned by eleven key principles. These principles guide schools in whole-school planning and curriculum development.

i. An Encompassing View of Curriculum

Curriculum is much more than a syllabus. A syllabus normally outlines the content to be taught. Curriculum on the other hand is dynamic and includes all the learning experience provided for the student. It encompasses the learning environment, teaching methods, the resources provided for learning, the systems of assessment, the school methods and the ways in which students and staffs behave towards one another. All of these provide experiences from which student learn. Together they add meaning, purpose and enjoyment to students' lives. Particular attention is required to ensure that there is congruence between the various dimensions of curriculum.

ii. An Explicit Acknowledgement of Core Values

People's values influence their behaviour and give meaning and purpose to their lives. While there is a range of value positions in our pluralistic society, there is also a core of shared values. The curriculum framework is underpinned by these shared values, which can be summarized as follows:

- a commitment to the pursuit of knowledge and achievement of potential, resulting in a disposition towards striving to understand the world and how best one can make a contribution to it, and the pursuit of excellence in all fields of experience and endeavour;
- self acceptance and respect of self, resulting in attitudes and actions which develop each person's unique potential-physical, emotional, aesthetic, spiritual, intellectual, moral and social;
- respect and concern for others and their rights, resulting in sensitivity to and concern for the well-being of others, respect for others and a search for constructive ways of managing conflict;
- social and civic responsibility, resulting in a commitment to exploring and promoting the common good; meeting individual needs in ways which do not infringe the rights of others; participating in democratic processes; social justice and cultural diversity; and

- ❖ Environmental responsibility, resulting in a respect and concern for the natural and cultural environments and a commitment to regenerative and sustainable resource use. These values which are listed in full on the inside back cover of the document, are woven through all aspects of the framework.

iii. Inclusivity

The curriculum framework is intended for all students in Indian schools. Inclusivity means providing all groups of students, irrespective of educational setting, with access to a wide and empowering range of knowledge, skills and values. It means recognizing and accommodating the different starting points, learning rates and previous experiences of individual students or groups of students. it means valuing and including the understandings and knowledge of all groups. It means providing opportunities for students to evaluate how concepts and constructions such as culture, disability, race, class and gender are shaped.

iv. Flexibility

The curriculum must be adaptable to the particular needs of different schools and communities. It must also be responsive to social and technological change and meet student's needs arising from that change process. In particular, it must encourage effective use of new technologies as tools for learning. The framework provided a balance between what is common to the education of all students and the kind of flexibility and openness required for education in the twenty first century.

v. Integration, breadth and balance

Effective education enables students to make connections between ideas, people and things, and to relate local, national and global events and phenomena. It encourages students to see various forms of knowledge as related and forming part of a larger whole. While opportunities to specialize must be provided to allow for specific talents and interests, all students need a broad grasp of the various fields of knowledge and endeavour. They also need experience in building patterns of interconnectedness, which help them to make sense of their own lives and of the world.

vi. A Developmental Approach

Students develop and learn at different rates and in different ways, constructing new knowledge and understandings in ways which link their learning to their previous experiences. The developmental approach of the curriculum framework accommodates these needs. At the same time, it provides students and their parents with a clear sense of the direction of students' learning, and through appropriate assessment and reporting procedures, of how students are progressing.

vii. Collaboration and Partnerships

Education is the shared responsibility of students, teachers, parents, tertiary educators and the community. Successful implementation of the framework requires a collaborative approach to planning by all concerned and collective responsibility for students' achievement of the intended outcomes.

The principle of curriculum frame work describes the overarching learning outcomes to which all learning area contribute. It describes learning and assessment strategies that are consistent with the curriculum framework and which promote achievement of the outcomes. Particular attention is given to the importance of maintaining a holistic view of curriculum, the responsibility of curriculum as a whole for such vital skills as literacy, numeracy and social cooperation, and the need to integrate knowledge, skills and values across all learning areas. The fundamental role of curriculum in the promotion of students' enjoyment of learning and excellence in learning is also emphasized. This statement provides a guide for whole school planning and review.

Learning areas individually and collectively contribute to the achievement of the overarching learning outcomes. Learning area statements are provided for the Arts; English, Health and physical education languages other than English; mathematics; science; society and environment, and technology and enterprise. These areas are a useful way of categorizing the knowledge, skills and values essential for the education of students. They provide a structure for defining learning outcomes, for providing breadth and balance in students' education and for ensuring attention is given to specific disciplines. The learning areas are consistent with those endorsed by the Indian educational policy as the basis for curriculum development.

viii. Curriculum is Dynamic

As the society and the social needs change from time to time there is need for revision of curriculum. No single curriculum is suitable for all the time. The curriculum has to change in accordance with the change in social strata due to individual growth, scientific process, technological innovation and social advancement.

ix. Curriculum is related with the Aims and Objectives

Aims and objectives of the people in a society have to be fulfilled through the experiences provided. These experiences are planned and spelt out in the curriculum.

x. Curriculum Development Implies of a Scientific Process of Education

The different stages involved in the curriculum process viz, objectives, content, experiences, organization and evaluation makes the curriculum a scientific process. It is no more based on the rigid tradition but supported by psychological, philosophical and social consideration.

xi. . Curriculum Involves Evaluation

Evaluation is a modern concept of the traditional examination or assessment. Whereas the old system is concerned of the results only, the evaluation is concerned of the results with reference to aims and objectives. The goals and aims are balanced in evaluation.

Check Your Progress 3

Notes: a. Write your answers in the space given below.
b. Compare your answers with those given at the end of this unit

1. What are the four functions of theory of curriculum?
   ……
   ……
   ……
2. Enlist the five initial process of curriculum development recommended by Smith and Moss.
   ……
   ……
   ……....
3. Define the term ‘Curriculum Framework’.
   ……
   ……
   ……

2.8 DIFFERENT STAGES OF SPECIFIC CURRICULUM

Curriculum in Primary Schools Under the education Act 1998, the Minister for Education and Skills may set down the curriculum for recognized schools. The National Council for Curriculum and Assessment is a statutory body, whose function is to advise the Minister of Education and Skills in matters relating to the curriculum for early childhood education, primary and post-primary schools, and the assessment procedures employed in schools and examinations on subjects that are part of the curriculum. This includes the subjects to be offered, the syllabus for each subject and the guidance and counselling provision to be offered. Under the Education Act 1998 the Minister:

- Must take into account the desirability of helping schools to provide other subjects that the Board of Management thinks are appropriate
- Must take into account the ethos of the school
- Can give directions to schools to ensure that the subjects and syllabuses are appropriate and relevant to the educational and vocational needs of those schools
- Must ensure that the amount of instruction time given to curriculum subjects is sufficient to allow for reasonable instruction in subjects that are related to the ethos of the school
- Must not force any student to attend classes in any subject that clashes with the beliefs of the parents

2.8.1 Primary Stage (5 years)

Primary stage of education has been visualized in two segments with inherent internal continuity. The first segment comprises Classes I and II, where children are just introduced to formal teaching and are at a stage of development which requires a smooth transition from informal and non-formal environment to a formal one. The second segment consists of Classes III-V wherein the children get prepared to understand the environment and learn in a systematic way. The scheme of studies for these two segments is given below:

Classes I and II

a. One Language — the mother tongue/the regional language

b. Mathematics

c. Art of Healthy and Productive Living

Experiences to be provided in areas (a) and (b) will constitute an integrated whole taking into its fold, the natural and the man-made environment. Teaching and learning of language and mathematics would be woven around the environment of the learners and integrate environmental concerns as well. Experiences to be provided for art of healthy and productive living will further contribute toward all-round development of the personality of the child. These will be organized keeping child in central focus involving students in activities commensurate with their developmental stage. Activities related to health will get a prominent place so that children acquire necessary skills, attitudes and habits to keep themselves healthy and participate in games and sports suitable for their age. Children will be initiated into preliminary yogic exercises and will be exposed to various soothing experiences in the field of music, drama, drawing and painting and clay modeling. In organizing these activities local factors may be given due importance. They will be encouraged to participate in creative activities such as free hand drawing and painting. Besides this, children will be involved in the activities related to work education so as to enable them to be free from inhibitions and like to work. For value inculcation stories and anecdotes would play an effective role. These will also generate and strengthen the element of curiosity, imagination and a sense of wonder. All the experiences will need to be presented in an integrated manner for which themes will be identified and teachers will make use of locally available resources and harness community support wherever necessary.

Classes III to V

a. One language - the mother tongue/the regional language

b. Mathematics

c. Environmental Studies

d. Art of Healthy and Productive Living

Children will be provided with experiences to help their socio-emotional and cultural development with a realistic awareness and perception of the

phenomena occurring in the environment. This may be accomplished by emphasizing observation, classification, comparison and drawing of inferences through activities conducted within and outside the classroom. The integrated approach would be most suitable to achieve the desired objectives. The experiences gained earlier will be further strengthened by ensuring participation of all children in the activities related to music, dance, drama, drawing and painting, puppetry, health and physical education, games and sports, yoga and productive work. Integrated approach will be used. Autonomy and flexibility incorporating the locally developed curriculum and materials will be encouraged. Concerted efforts will be made to ensure proper value orientation among children.

Upper Primary Stage (3 years)

a. Three Languages - the mother tongue/the regional language, modern Indian language and English

b. Mathematics

c. Science and Technology

d. Social Sciences

e. Work Education

f. Art Education (fine arts: Visual and Performing)

g. Health and Physical Education (including games and sports, yoga, NCC and scouting and guiding)

2.8.2 Secondary Stage (2 years)

a. Three Languages — the mother tongue/the regional language, modern Indian language and English.

b. Mathematics

c. Science and Technology

d. Social Sciences

e. Work Education

f. Art Education (fine arts: Visual and Performing)

g. Health and Physical Education (including games and sports, yoga, NCC and scouting and guiding)

Curricular Area for (I to X)

a. Language

Language learning at the primary stage is crucial to not only meaningful learning in all the subject areas but also to the learner's emotional, cognitive and social development. New entrants with poor language background remain poor learners and poorer performers in all areas unless specially helped in language skills. Failure to teach language skills properly and adequately in the early years will lead to difficulties in learning subsequently through the upper primary, the secondary and the higher secondary stages. Language education has the greater potential as a means to develop, progressively through various stages, attitudes and values related to all the core components by incorporating appropriate themes and adopting suitable teaching learning strategies. During the first two years of the primary level, children have to be specially helped to acquire the basic skills of listening, speaking, reading, and writing and thinking. At the upper primary stage, students' competence in both the languages has to be strengthened further to enable them to acquire real life skills to be used in their future day-to-day life. In their first language, they have to be introduced to various forms of literature. The study of the third language would also begin at the upper primary stage. The study of all the three languages, then, has to continue up to the end of the secondary stage, i.e., Class X. At the secondary stage (Classes IX and X) in the first language full mastery over the applied form of language and good acquaintance with literary language would be aimed at. Learners have to achieve maturity in oral and written expression in response to what they read or listen to. Thus, high order communication skill in the first language, with grammatical accuracy and appropriateness of style must be adequately underlined as the main objectives of first language learning at this stage.

b. Mathematics

One of the basic aims of teaching mathematics in schools is to inculcate the skill of quantification of experiences around the learners. It Mathematics helps in the process of decision-making through its application to real life situations in familiar as well as non-familiar situations. In the first two years of the primary stage, i.e., in Classes I and II children need to form some basic pre-

number concepts related to size, length, mass etc. These provide them a sound foundation for learning numbers and developing competency of addition and subtraction. In classes III to V, the child should be introduced to numbers and fraction as a concept. The four fundamental operations - addition, subtraction, multiplication, division, and computational skills related to them need to be mastered on numbers and fractions. The concepts of length, mass, capacity, money, time, area and volume are developed along with the units of measuring these. At the secondary stage, the teaching-learning of mathematics has to serve two complementary purposes. Firstly, the aim should be to further enhance the capacity of the students to employ mathematics in solving problems that they face in their day-to-day life. Secondly, a systematic study of mathematics as a discipline has to be started here and continued further. The curriculum may include the study of relevant arithmetical concepts, number system, algebra, geometry, trigonometry, coordinate geometry, mensuration, graphs, statistics etc. The idea of proofs should be developed with thrust on deductive reasoning. At the secondary level, evaluation should lay stress on testing the understanding and application of concepts rather than testing the rote memory of the concepts.

c. Science and Technology

Science forms an integral part of learning at the primary stage. Essentially it has to be learnt mainly through concrete situations related to immediate environment during the first two years. The process of searching for answers independently and in groups can begin at this stage. Skills of estimation and measurement can also be developed. Children at this upper primary stage begin to recognize, the relationship of science, technology and human enterprise. The process has to be strengthened and concretized. Elementary understanding of some basic principles of science relating to matter, materials and energy can be introduced at this stage. Instead of loading the students with scientific information, efforts should be made to help them to learn key concepts which cut across all the disciplines of science. At secondary state Scientific attitudes and skills developed. At this stage, learning of science would continue to be built around natural and social elements of environment. Science, technology, society and environment would coalesce in teaching and learning of science at this stage. Practical activities to be chosen should have

relevance for future life through acquisition of skills and values. Teachers could help the learners devise appropriate experimentation and activities within the school and also outside school involving immediate environment such as farming, factories, industries and community.

d. Social Sciences

The component of social sciences is integral to the total quantum of general education up to secondary stage. It helps the learners in understanding the human environment in its totality and developing a broader perspective and an empirical, reasonable, and humane outlook. Teaching of social sciences ought to promote a humane and national perspective, and inculcate a sense of pride in the country and in being an Indian. In Classes I and II, children are introduced to the environment in its totality. The skills of observation, description and self-expression could be promoted in this stage. In Classes III to V, the natural and social elements of environment may be introduced under a separate area of study called Environmental Studies. Some well-known personalities of the community and the country, who acted as major influences in shaping lives of people, may also be included in the curriculum. Schools will be given full autonomy at this stage to use locally developed curriculum and locally available resources for teaching of environmental studies. At the upper primray Stage the learners may be gradually initiated into the study of India and the world in some greater detail. The components of environment and their interaction will be studied in terms of processes and patterns. The contemporary society including the social, political and economic institutions of India and their functioning, the administrative system, urbanisation and economic and social development may be some other areas to be included. In addition to academic skills, social skills and civic competencies may be developed to help them grow and participate effectively in day-to-day life. At the secondary stage, Major developments in the recent past including India's struggle for freedom and the contributions of various sections/regions/groups especially the role of women and weaker sections in the movement having bearing on the social, economic and political developments and challenges in the post-independent India will also be covered. At the end of the secondary stage, the students may develop the ability to use their knowledge, understanding and skills by undertaking wide

range of studies at various scales-local, regional, national. It would be useful if students take up a few case studies/project works as it would help them investigate and consider the issues that arise from people's interaction with their environment.

e. Art of Healthy and Productive Living

The need for introducing an interdisciplinary area of learning integrating the major concerns of Health and Physical Education, Art Education and Work Education has assumed greater significance. The main objective of art of healthy and productive living is to develop aesthetic sensibilities and skills of healthful living besides providing a nurturing ground for love for labour, positive social attitudes and moral values so as to enable the child to be receptive to ideas of others with humility and sincerity in thought, word and deed. In Class I and II, The activities could be organized which help children make subjective choices about music and also drawing and painting in some shapes, developing clay models during play, and participating in group activities involving light exercises, group songs, theatrical arts and dances and imitative actions. This stage is apt for value inculcation through storytelling and dramatization suiting to the level of maturity and understanding of learners. All such activities need to be presented in an integrated manner. At this stage children may also develop a habit of keen observation and accurate description of things around them. They may pick up the skills of both, cleaning the teeth and dressing up. Now the children have also to learn behaviour and speech in formal settings. They are to be taught how to sit and stand properly and how to talk in a formal manner. At this III-V stage, children develop better muscular coordination and acquire sensory discrimination. The play at this stage may include light physical exercise and drill which can be combined with music. This is the stage when children can be taught to develop elementary knowledge relating to health, strength and beauty of the body. In this stage, may appreciate beauty in the objects around them and undertake exercises, and develop sense of preference for things and music. Activities pertaining to drawing and painting, collage, clay modeling, printing, using masks, puppets and toys, folk dance, rangoli, alpana and the like may constitute the syllabi at this stage. It will be desirable to orient teachers in undertaking activities pertaining to the art of healthy and

productive living in an integrated manner. Suitable instructional materials both in print and non-print form including wall posters addressed to the teachers may prove to be of great help in initiating children to the art of healthy and productive living.

f. Work Education, Art Education, Health and Physical Education in Upper Primary and Secondary Stages

a. Work Education

Work Education is viewed as purposive and meaningful manual work, organized as integral part of the learning process and resulting into goods or services useful to the community besides the pleasure of self-fulfillment. The programme should develop among learners the skills for identifying, selecting, arranging and developing innovative methods and observing, manipulating and participating in work practices and thereby enhancing productive efficiency. At the upper primary stage, the learners are sufficiently mature to carry out strenuous work involving higher skills and requiring closer neuro-muscular-coordination. . The activities have to lead to enhancement in nutrition, personal and community health, sanitation, productivity and economic status of the community. Thus, activities may have three dimensions, observation of work situation and identification of task, participation in work situation, and preparing articles in large numbers. All activities need to be simple and enjoyable. At the secondary stage, the complexity of the activities needs to be increased keeping the nature of essential activities, by and large, the same. Pre-vocational courses will get a prominent place at this stage which will facilitate choice of the vocational courses at the higher secondary stage and help them acquire the knowledge and skills required for entry into the world of work.

b. Art Education

Art education constitutes an important area of curricular activity for development of the personality of the learners. The aim of art education may be perceived as development of aesthetic sensibility among learners so as to enable them to respond to the beauty in line, colour, form, movement and sound. At upper primary stage, art education programme should comprise, handling of the materials for drawing, painting, collage, clay modeling and construction of puppets; creating artistic things by free expression method and

specific topics method; handling and playing of simple musical instruments and sound-producing bodies; movement, mime and simple dance forms; community singing; simple concepts of visual and performing arts; theatrical arts; stories of great personalities in the field of arts; and stories connected with other countries. Theater arts and dramatisation may be suitably introduced. Emphasis should be laid on the use of learner's own imagination and development of his/her own concepts and expression through exploration. He/she should be enabled to develop a sense of organisation and design, i.e., aesthetic arrangements permeating all life, and to feel a deep and lasting joy of art. The secondary stage is apt for refining aesthetic sensibilities and social values. Art education at this stage should comprise, study of visual and aural resources and their exploration; projects leading to creative expression and exhibition of the works in visual and aural forms; inter-group inter-school art activities; study trips and interaction with artists in the community; and exploration of traditional art forms including theatrical arts available in the community and neighbourhood. Art education should not be fragmented. It should adopt an integrative approach at all stages up to Class X.

c. Health and Physical Education

Health and physical education has to be concerned with total health of the learner and the community. It will include mental and emotional health besides physical health of the learners. The main aim of health and physical education programme should be to develop desirable understanding, attitude and practices with regard to nutrition, health and sanitation so as to improve health status of the self, family and the community. At upper primary stage keeping in view the characteristic physical growth, neuro-muscular coordination and social development, the learners may be exposed to vigorous developmental and rhythmic exercises, gymnastics, athletics, aquatics, judo, yoga, drill and marching, scouting and guiding camping and various team games and competitions. In health education, provision should be made for creation among learners awareness related to common health problems, safety measures, nutritional problems, adulteration, first-aid, sanitation and pollution. Exercises of breath and yoga should receive special attention. Physical education should include more vigorous activities of various sorts including athletics, major games including indigenous games, gymnastics, yogic

exercises, meditation, combatives, judo and swimming. The NCC, scouting and guiding and social service should be encouraged in addition to the compulsory programmes of physical education. In Classes IX and X, health education should enable the students to learn, in comparatively great detail, about personal health, impact of environmental pollution on health, food and nutrition, control and prevention of diseases, first aid, home nursing, and safety measures. The knowledge of and activities related to personal and community health assume great importance. An awareness of HIV and AIDS may be given. Students may also be acquainted with evils associated with promiscuity and child and drug abuse. Adolescence education and sex-education may also be provided in a suitable manner. It would be desirable to generate suitable self-instructional material in this regard for different age groups of learners addressing to their needs and requirements and matching to their level of growth and maturity. It should be provided to all learners. Provision for separate teacher and classes may not be encouraged. The whole approach should be such that each learner participates and learns ways of healthful living.

2.8.3 Higher Secondary Level

After the ten year common programme of studies, primarily of language skills, scientific literacy, basic mathematical and social skills, cultural heritage of the country, issues relating to political, economic and social life and environment, the stage is ripe for exposing the students to differentiated and specialized in-depth courses in humanities, social sciences, science, mathematics, commerce and the like on the one hand, and a variety of vocational courses on the other. Thus, according to one of the most important recommendations of the Kothari Commission, the curriculum at this stage is to be organized under two streams, the academic stream and the vocational stream. However, there is a need to ensure that appropriate linkages between the two are not only maintained but systematically strengthened.

I. Academic Stream

The objectives of academic courses at this stage may be:

- to expose learners to higher levels of knowledge in different disciplines

- ❖ to introduce them to different ways of collecting and processing data and information under specific disciplines, and help them in arriving at conclusions and generating new insights and knowledge in the process
- ❖ to promote problem-solving abilities and creative thinking in the citizens of tomorrow; to cope with the changing demands of a society committed to use science, technology and informatics; and
- ❖ to assist students to explore their interests and aptitudes in order to choose appropriate careers for shaping their future.

Scheme of Studies

The curriculum at this stage will comprise.

i. Foundation Courses;

ii. Elective Courses

i. Foundation Courses

At the higher secondary stage, students opt for academic or vocational courses. However, they all need to have a foundation course. Nevertheless, the component of general education is to be kept to the minimum by incorporating in the curriculum only a few but highly significant elements. The common component of curriculum thus, would consist of:

a. Language and Literature,
b. Work Education, and
c. Health and physical education, games and sports

a. Language: The objective of teaching language as a component of the Foundation Course is to nurture among learners advanced communication and negotiation skills, higher order reading, writing and study skills and a humane, appreciative and futuristic approach to life and its various manifestations.

b. Work Education: The final shape of the emerging India to a large extent will be determined by the commitment to work ethics in its schools. The country's philosophy and attitude toward work, its efforts to develop skills and healthy work habits, and its resolve to improve productivity in every walk of life would depend, mainly, on the place it assigns to work education in schools, in and outside the classroom. This explains why work education finds a place in the Foundation Course curriculum meant for the academic stream at the higher secondary stage.

c. Health and Physical Education: Health, physical and mental, is the primary wealth in life. Therefore, health and physical education must be perceived as an integral part of curriculum at any stage of education. It should also contain elements of adolescence education and sex education.

ii. Elective Courses

The elective courses will have to cater to the varied and heterogeneous clientele. While quite a few of the students may be preparing for entry into tertiary education, many more would be preparing to enter the world of work.

II. Vocational Stream

Vocational Stream Introduction of the vocational stream was a recommendation of the Kothari Commission (1964-66) and it had far reaching consequences in the context of providing skilled manpower enriched with entrepreneurial skills and competencies. The National Policy on Education, 1986 (revised 1992) set a target to cover twenty-five per cent of the higher secondary students under vocational courses by 1995. But, so far, we have reached the enrolment of only nearly five per cent. In order to meet the required targets and also respond to the emerging challenges, vocational education needs to be given a high priority. The nature of technological advancement and the highly competitive world demand continuous upgrading of knowledge and skills for every person in every walk of life. While opportunities for formal employment in organised sectors are now decreasing, they are increasing in service sectors. Skills necessary for self-employment and entrepreneurship are to be provided to all the students entering the field of vocational education.

Scheme of Studies

At the higher secondary stage, the vocational education programme aims at developing through diversified courses skills and related knowledge required for a specific occupation or a group of occupations to prepare children for the world of work, especially for self-employment. The courses for the vocational stream will consist of:

a. Language

b. General Foundation Course

c. Health and Physical Education, and

d. Vocational Electives.

a. Language

The study of language would take care of communication skills which in no way are less important for students pursuing vocational courses. The only, but highly significant, difference would be in organising the language courses in such a way that they take care of the grammatical structures and additional vocabulary peculiar to the trade or vocation of each student. In addition, there would be units on culture and literature to cater to the emotional and intellectual growth of the learner and the harmonious growth of his personality. The choice of the language may be determined by the learners' need and the infrastructural facilities available in the system.

b. General Foundation Course

The General Foundation Course for the vocational stream will mainly comprise general studies, entrepreneurship development, environmental education, rural development and information and communication technology. The course in general studies is the extension of the foundations already laid during the first ten years of schooling. Its purpose is to sensitize the youth to the social, economic, political and moral or ethical issues of contemporary India and the world. Entrepreneurship development including salesmanship is necessary for self-employment and, as such, forms an important part of the general foundation course.

c. Health and Physical Education

At every stage and in every stream of schooling, opportunities for regular physical training and activities must be provided for physical fitness. However, for the students of vocational courses, the exercises and activities involving less of physical strain will be more suited because these students have to undertake strenuous physical activity in their practical work and on the job training in the regular vocational courses. Keeping this in view, physical activities like yoga, meditation, and light exercises involving posture change, and relaxation may be recommended. Improvement of local sanitation and public health should form part of the fieldwork of this course.

d. Vocational Electives

Vocational courses cater to the requirements of varied and heterogeneous clientele. Majority of the pass-outs from the vocational stream will soon be entering the world of work. Students have to be given a large number of

options based on the local needs, employment opportunities for wage employment and self- employment, their aptitude and interest, and the geographical location of the school. Students will, thus, get an opportunity to choose courses in the areas of their liking. Within each broad area, a number of courses for developing specific competencies are to be prepared. This can be done after a detailed analysis of the functions and tasks expected to be performed by a worker in that area. Evaluation and Certification Assessment in vocational courses has to be performance oriented. Continuous and comprehensive evaluation, with a built-in procedure for remedial measures, will ensure effective achievement of the requisite competencies. A complete and comprehensive record of the assessment of the students' performance including evidences reflecting their personality traits will be maintained. Both process and product assessment are important for correct evaluation. The certificate issued will make a mention of the competencies acquired along with the credits earned therein.

2.9 CENTRAL AND STATE BOARD OF SECONDARY EDUCATION SYLLABUS

Syllabus refers to the content of what is to be taught and the knowledge, skills, and attitudes that are to be deliberately fostered, together with stage-specific objectives.

i. Central Board of Secondary Education

Central Board of Secondary Education comes under the Union Government of India. It is a board of education for public and private schools. It was formed in 1962. CBSE is the most popular board in India; more than 9000 schools in India follow CBSE. It is started by 'NCERT' to operate central schools like Kendriya Vidyalayas. Later it was adopted by many private schools. The State Council Education Research and Training (SCERT) have an affiliation to the government of that particular state. The board conducts final examinations every spring for 'All India Senior School Certificate Examination' (AISSCE) for Class 10 and 12. It also conducts AIPMT (All India Pre Medical Test) for admission to major medical colleges in India. CBSE's main aim is to prepare students for Engineering and Medical exams. It is applicable from Nursery to class-XII (age 4-17). It conducts two board examinations for classes 10th and

12th. It also covers the curriculum for pre-school (age 3-5 years). The CBSE is using CCE System as a grading system.

CBSE Syllabus

CBSE is an autonomous body. Almost all schools in India like Kendriya Vidyalaya as well as the Jawahar N Vidyalayas in addition to other private schools in the Delhi NCT are affiliated to the CBSE syllabus. The complete syllabus is separated into units. Each unit is then allotted a number of periods that are necessary to cover the portions of an academic year. The weightge marks thus got will be added to the score of the final examinations. By this method, the students and the teacher would able to plan the study of the variety of divisions of the syllabus correctly and efficiently.

ii. State Board

State Boards are Boards undertaken by individual State Governments in the states of India. Each state follows its own syllabus and grading strategy. Study of the regional language and culture is encouraged and practiced. State board examinations are referred to as Madhayamik for Secondary State Certificate and Higher Secondary Certificate examinations. Easier than other boards and does not focus on competency for entrance examinations of medical and engineering. Each state board has some variance from NCERT syllabus and focuses on local state education. Emphasis is more on state level topics and content of local relevance. It is also applicable from Nursery to class-XII (age 4-17). Some state boards, however take a special board exam in 8th grade apart from the usual 10th and 12th grades. Each state has its own board of education that conducts certificate examination for class 10 and class 12. Some state boards, such as Rajasthan board conducts exams in class 8 also. The SSC/HSE systems are severely lagging behind in imparting communication skills and confidence in the students.

State Board Syllabus

The State Board syllabus is dependent on the government of that particular state. For each state, a separate education board would be available. The syllabus would then be decided by them as per the norms and standards. The mode of instruction of this type of study will included English as well as the regional language. The differences between CBSE and State Board can be explained as follows:

Differences between CBSE and State Board

An education board is a group of experts, trustees in the field of education who help in determining the education policy for the area, region or state that they govern. In our country, while CBSE (Central Board of Secondary Education) is an autonomous body that comes under the Union Government of India and determines the educational curriculum and exam schedules for schools over the entire country, every State Government has its own education board too to determine the policies and curriculum for the schools in that state.

- **Difference in Mode of Instruction and Exposure**

For each state, the individual state board established by its government takes care of the designing and monitoring of the standards of education and examination in that state. The study syllabus for schools in that state is decided by this board and the mode of instruction here, unlike CBSE where in it is only English or Hindi can be English or the Regional language of the state. Also, while CBSE prefers to offer education in a scientific and national exposure, almost all state boards focus more concepts of local importance.

- **Difference in Applicability**

Schools registered with CBSE have to follow the guidelines given by the board for pre-primary grades to higher secondary grades or in simple words from K -12 classes. All the government schools in India like the Kendriya Vidyalayas, the Sarvodya Vidyalas, the Jawahar N Vidyalayas, etc. all strictly abide by the guidelines given by CBSE. In addition to these schools, several private schools especially those in Delhi region to follow the same board while imparting education to their students. But the policies and programs setup by State boards relate to only the schools registered with them in that particular state.

- **Difference in Categorization of Syllabus**

CBSE ordains that each and every subject's entire syllabus be divided into units. And each unit is then allocated a certain number of periods or lectures required to cover the topics of the unit in the class during the academic year. This kind of setup is systematic and allows all the teachers to schedule their lectures efficiently and the students to plan their study and preparation correctly. Each state board works according to a syllabus designed and

categorized by the 'Department of Education' of the state government which may or may not change in the next academic year.

- **Difference in Consistency Over The Country**

CBSE is also known well for its nation-wide approach. In case a student needs to change his/her residence from one state to another, he might face some major challenges in shifting from one style and mode of education to another because the two states would follow different curriculums. Whereas shifting from a CBSE school in one state to another CBSE school in the other state would be a lot easier for them.

- **Difference in Updates and Reviews**

CBSE board is deemed to be much better than its state-specific counter parts because of its experienced members and their routine of customary syllabus review and update cycles. It has been witnessed that some state boards have failed to update their curriculums even once according to the demand of the education field in the contemporary times. They have fastened on to the same curriculum and syllabus for subjects over the past years.

Key differentiators between CBSE and State Board Syllabus

While the CBSE syllabus offers education in a more scientific method, the State Board syllabus gives more importance to practical implication of related subjects. Another main differentiator amid the two is that, the CBSE is considered much better than latter. Students of the CBSE have an advantage of the State as the syllabus of the CBSE will be the same all over the nation. In case the students transfer from one state to another, the transition will be marginally easier for them. This would not be similar in the case of the State Board syllabus. It would be difficult for some to adjust to the syllabus of another government schools.Both State and CBSE Board are having their own education pattern .It's totally depends on you which board you want to choose.

2.10 ROLE OF TEXTBOOKS IN CURRICULUM

The Role of the Textbook and 'National Standards' The Secondary Education Commission (1952) had pointed out that the then curriculum was 'narrow, bookish and theoretical' with an overloaded syllabus and unsuitable textbooks. It had suggested that the curriculum should not be divided into a number of

watertight subjects, but that all subjects should be interrelated and should include relevant and significant content so that it could touch the lives of students. It also recommended that a high powered committee be set up in every State for selecting textbooks and for laying down appropriate criteria, emphasizing that 'No single textbook should be prescribed for any subject of study, but a reasonable number which satisfy the standards laid down, should be recommended, leaving the choice to the schools concerned'. The subsequent Education Commission (1964–66) continued to highlight the poor quality of school education and commented on the low quality of textbooks, owing to the lack of research related to their preparation and production, and the lack of interest of top ranking scholars in this area. It called for the definition of 'national standards' and recommended centralized textbook production to conform to those, starting at the national level and also supporting establishment of bodies at the State level. In hindsight, we can see that the problematic role of the textbook continuing from the colonial education system, which has assumed a sacrosanct position in the school and the classroom, marginalizing the role of the curriculum and the syllabus, was further strengthened from the then expectation that the 'nationally produced' textbook would 'far more precisely' indicate the national standards.

There are problems in the notion of 'common' textbooks across the country, in either science or history, especially since now, forty years later, there is a more nuanced understanding of child development and pedagogy that shows that learning happens when the 'content' of curricula is contextualized in the child's experiences and cultural knowledge, whether of plants, animals, people, or processes. However, at that time the recommendations seem to be guided more by the need to attract the best 'national' talent to contribute to the improvement of school education. Indeed, the Education Commission also saw this process of producing 'national books' as one that would help build capacities and "stimulate other centres into activity and especially promote similar enterprise at the State levels" (Section 9.20). "Even in areas where national books are available, independent attempts by States will stimulate each other and the Centre itself".

The notions of curriculum and syllabi as existing in the three National Curricular Frameworks (NCFs) are close to each other. The NCF 75 actually defines the curriculum and syllabi. However, this notion of curriculum and syllabi does not include aims of education; it rather sees the aims as guiding the curriculum from outside. The other two documents also do not take up the task of defining but largely follow the same definition. All the NCFs emphasize the concerns and issues but do not make a very clear connection between the concerns, aims, and curricular content. The pedagogy and the view on knowledge also remain hazily defined. Thus, though the NCFs seem to have some form of definition for curriculum and syllabus, the relative importance of elements within the form and their interconnections remain either unexplored or even entirely neglected. The rationale for almost all prescriptions is left unstated. Most of the state level curricular documents are poor imitations of the NCFs and the emphasis is mainly on the scheme of study—time and weightage allocation—and syllabi. Most of them do not even see the larger picture of curriculum. Educational writing and discussion largely remains equivocal in the use of these terms. Even the most of innovative programmes, which have taken a much more flexible approach to curriculum, do not seem to have seen the entire picture. They often amplify their chosen aspect of education disproportionately. The view taken on learning is often articulated in national and state documents, and most fervently in the NGO documents. The overall impression one gets in the national discourse on education is that a theory of learning, even if defined loosely and not very clearly, is all that is needed to plan education in general and curriculum in particular. There is hardly any mention of a view taken on knowledge beyond what is necessitated to articulate the chosen view of learning.

The present day classroom practices are, in almost all schools of the country, totally dominated by textbooks. All premises of flexibility of the curriculum and syllabus and freedom of the teacher are completely forgotten by the time an educational plan reaches the classroom. The teacher is seen as either incompetent or unwilling or both, the school are seen as devoid of all learning material, and the environment is seen as of no use in the child's learning. The textbook emerges as the single solution to all these problems. It is sought to

collect all the knowledge that a child is supposed acquire at a given stage or class and is planned so that the child never needs to look beyond it. Thus 'teaching the textbook' becomes the whole of education. As a result of this undue importance given to the textbook, it has acquired an aura of supremacy and a standard format. It has to be completed from cover to cover in a strict sequence, has developed a language of its own that is difficult to comprehend, and is laden with dense concepts. It has become a symbol of authority difficult to ignore or disobey.

2.11 CURRICULUM REFORMS IN INDIA

The curriculum reforms have been taken up by Government of India through NCERT and developed National Curriculum Frame work -2005. The major issues of curriculum at school education level have been discussed i.e, information loaded textbooks, and memory based examinations dull routine and board teaching and rote systems of learning. And no clear connection between concerns, aims and curricular contains. The pedagogy and the view on knowledge also remain somewhat not well defined. The following are the guiding principles reflected in the NCF 2005 document for the undertaking curricular reforms and development of syllabus and textbooks and will be considered for state level curriculum reforms and textbook development:

- Connecting knowledge to life outside the school
- Ensuring that learning is shifted away from rote methods
- Enriching the curriculum to provide for overall development of children rather that remain textbook centric
- Making examinations more flexible and integrated into classroom life and
- Nurturing an over-riding identify informed by caring concerns within the democratic polity of the country.

During the struggle for independence, it was realized that the curriculum introduced in India as a result of Macaulay's Minute 1835, it was not accord with the needs and inspiration of India. A major effort towards the reforms of education and curriculum was made by Gandhiji when he propounded the Basic system of education. Besides craft, physical and social environment

were also considered very important in school curriculum. The following are some of the reforms recommended by different bodies/agencies of Education:

- The University Education Commission 1952-53 recommended a diversified curriculum with some core subjects at the higher secondary stage.
- The Secondary Education Commission 1964-66 considered the working of the entire system of education in the country and made suggestions for restructuring the curriculum in the light of explosion of knowledge.
- The recommendations of the Education Commission led to the formulation of the National Policy of Education, 1968 which envisaged 10 +2+3 pattern of education for the entire country.
- In 1975, a new curriculum for the pattern of 10+2+3 system was formulated by the NCERT.
- In 1977, the Ishwarbai Patel Committee, appointed by the Government of India, suggested the Inclusion of Society Useful Productive Work (SUPW)at the school stage.
- THE 1977-78 Committee on Vocational course at the +2 stage, headed by Dr.Malcolm S. Adiseshiah reviewed the vocational courses and suggested guidelines for introducing changes in vocational courses.
- The National Policy on Education 1986, provided a new direction to the curriculum. It envisages curriculum as an important instruction in realizing the ideals of society as enshrined in the constitution.

The visible face of reforms in curriculum consists of changes in the syllabi and textbooks, but the invisible face is far more complex. Even in the limited context of syllabi and textbook, popular perception of curricular reforms focuses on ‘revision’, updating or improvement. It is seldom recognized and expected that curricular reforms may require a deeper redesigning of pedagogic relations and may, therefore, require a longer gestation period before their impact is felt. The Indian case of recent curricular reforms has both these faces.

The formulation of the National Curricular Framework (NCF-2005) by the NCERT initiated a vast debate across the country on priorities and problems regarding how knowledge is selected and represented across the school curriculum and on how it is handled by teachers in the classroom. The new syllabi and textbooks brought out by NCERT since 2006 have deepened this debate, and many other initiatives have enabled the debate to be absorbed and pursued at different levels of administration in the states. Many states have decided to adopt the new textbooks; several others have created their own, negotiating the NCF perspective with the help of NCERT's exemplar material. This process is still going on and the recent review of five states carried out by NCERT shows that although substantial progress has been made, the picture remains mixed. Some of the problems arise out of institutional structures directly in charge of curricular reforms, their academic status and capacities, and their access to the intellectual and creative resources available in other institutions.

However, many persistent problems have their roots in the bureaucratic functioning of the directorates of education and the boards entrusted with examination and certification. Teacher education is currently a major priority of curricular reforms in India. NCF-2005 has been followed up by a National Curriculum Framework for Teacher Education (NCFTE, 2009). The National Council of Teacher Education (NCTE), the organization statutorily responsible for teacher education, has started reviewing the curriculum of teacher training followed in different states. This exercise is being guided by the pedagogic perspective articulated in NCF-2005 and the legal framework of the Right to Education (RTE) act. Together, these 2 documents place the teacher in the role of a social architect whose professional awareness and acumen are expected to address the deeper anxieties and priorities NCF-2005 resonates. These relate to the endemic problems of discrimination in the classroom. Curriculum and pedagogy are at the heart of RTE's goals of achieving universality of elementary education while ensuring gender parity and equality among all social groups in an inclusive classroom environment. These goals cannot be achieved by changes in the syllabus and textbooks alone. Teachers' belief and commitment to these changes are going to play a crucial role in taking the NCF initiative forward. NCERT has broadened the

scope of curricular reforms in order to create an ethos conducive to change. Its programmes for teacher trainers have concentrated on improving theoretical understanding of the NCF perspective. Interactive sessions with subject experts through satellite communication have enabled a vast body of functionaries to comprehend the basis of the changes made in the design of syllabi in different subjects. Recognition of indigenous innovations - both by individual teachers and institutions--is another dimension of NCERT's plan. It has given supportive grants and academic advice to schools representing the heritage of innovation. Yet another major aspect of NCERT's vision of curricular reform is the identification of two critical curricular spheres on which the nature and quality of learning depends. These are reading and mathematics. By focusing on the early primary grades, NCERT's research and training in these two key areas will enable the larger system to overcome a long-term academic deficit. The preparation of a 40-part graded reading series, Barkha, marks an important beginning in a neglected of the primary-level curriculum. Finally, a great deal of attention is being paid to improving assessment and evaluation. The focus is on enabling teachers to make assessment and record-keeping an aspect of teaching.

Check Your Progress 4

Notes: a. Write your answers in the space given below.
b. Compare your answers with those given at the end of this unit

1. What is the recommendation of National Curriculum for Elementary and Secondary Education in subjects of Primary level?
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   ……
   ……
2. What are the objectives of academic stream of higher secondary level?
   ……
   ……
   ……
3. What are the guiding principles of National Curriculum Framework (2005) for State Level Curriculum reforms and textbook development?
   ……
   ……

2.12 LET US SUM UP

Curriculum aims range from the very broad to the more specific. In fact, that is why we use the terms aims, goals and objectives to refer to them. Aims are broad statements which cover all of the experiences provided in the curriculum; goals are tied to specific subjects or group of contents within the curriculum; while objectives describe the more specific outcomes that can be attained as a result of lessons or instruction delivered at the classroom. Curriculum is defined as 'Any document or plan that exists in a school or school system that defines the work of teachers, at least to the extent of identifying the content to be taught student and the methods to be used in the process (English, 2000). The educative experiences learners have in an educational program. The purpose of which is to achieve broad goals and related specific objectives that have been developed within a framework of theory and research, past and present professional practice, and the changing needs of society (Parkay, 2006). According to Demirel (2007), educational programme organized within the framework of a particular programme and a plan emerges through including the experiences of students. These definitions are especially for objectives, content, teaching-learning process and evaluation activities that are clearly written for the official programme. Schools are responsible for individuals' academic, social and emotional development. While improvement is undoubtedly occurring provided with the successive curriculum reforms in the taught curriculum via the mandated curriculum revision processes, there seems to be some doubt as to the long-lasting, substantive change in educational programming. Realization of a sustainable education paradigm requires vision, image, design, and action from all concerned with achieving healthy, ecologically sustainable societies. Time is critically short to make the educational changes necessary to ensure a secure future. In today world, where technological knowledge is evolving with each day, educational institutions need to be granted freedom to engage with the industry and change the curriculum as and when required. Educational institutions must teach what the industries need and to meet the challenge the societal need by incorporating learners' achievement in all aspects effectively.

2.13 UNITEND ACTIVITIES

1. Discuss the different curriculum at different level of education in Indian Context.
2. Review the subjects recommended by Curriculum Reforms of India.
3. Evaluate the role of core and hidden curriculum in secondary level.

2.14 POINTS FOR DISCUSSION

1. Elaborate the principles of curriculum development with the examples.
2. Discuss the important of theories of curriculum development.
3. Explain the points to be remembered in the development of curriculum in higher secondary level?
4. Write a note on 'Different stages of specific curriculum'.
5. Compare role of Textbooks in teaching primary and Higher Secondary level?
6. Give brief history of Curriculum reforms in India.

2.15 ANSWERS TO CHECK YOUR PROGRESS

Check Your Progress 1

1. Concept of curriculum development stated as:

- Curriculum as a Plan
- Curriculum as an Experience
- Curriculum as a Subject-matter
- Curriculum as an Objective
- Curriculum as a System
- Curriculum as a Field of Study

2. The basic principles of curriculum Development:

- should be human development oriented
- Principle of The curriculum should be child-centered
- The curriculum Totality
- Principle of LPG (Liberalization, privatization and globalization) and
- Principle of Values

3. Learner-centered curriculum prescribed the following designs:

- Child-centered design
- Experience-centered design
- Humanistic-centered design

4. The characteristics of core curriculum are:

- Core curriculum utilizes the problems of personal and social development
- It develops these problems without reference to the traditional subject matter fields.
- It encourages the use of the problem- solving technique
- There is a provision for individual and group guidance
- It focuses central purposes of problem given and
- It stimulates the individual interest

Check your Progress 2

1. The three types of curriculum teaching in school level are:

- Explicit Curriculum
- Implicit Curriculum and
- Null Curriculum

2. The content of the Curriculum from the first grade till the last grade are arranged in such a way that the first grade the area covered is very small, in the next grade, it is larger than the first level. And thus, for the next grade, it will cover the information more for the content and it will continue up to the largest areas covered for that particular concept or event related to the grade or standard.

Check Your Progress 3

1. The following are the functions of theory of curriculum:

- Description
- Prediction
- Explanation
- Guidance

2. The first five initial process of curriculum development recommended by Smith and Moss are:

i. Specifying the role for which training is to be provided
ii. Identifying the specific tasks that comprise the role
iii. Selecting the tasks to be taught
iv. Analyzing each of the tasks
v. Stating performance objectives

3. Curriculum Frame work is a document (or set of documents) that sets standards for curriculum and provides the context (available resources, capabilities of teachers and system support) in which subject specialists develop syllabi'. A curriculum framework is usually a single document which is supplemented by other materials to guide the implementation of specific

parts of the framework. It may give more detailed specification or guidance by individual year, subject or learning area, addressing the requirements of the school system, individual schools and the classroom and it may include syllabi, programmes of study, year plans and lesson plans.

Check Your Progress 4

1. Recommendation of National Curriculum for Elementary and Secondary Education in subjects of Primary level is:

For Classes I and II: (pre-primary)

a. One Language — the mother tongue/the regional language
b. Mathematics
c. Art of Healthy and Productive Living

For Classes III to V: (upper-primary)

a. One language — the mother tongue/the regional language
b. Mathematics
c. Environmental Studies
d. Art of Healthy and Productive Living

2. The objectives of academic courses at this higher secondary level are:

- to expose learners to higher levels of knowledge in different disciplines
- to introduce them to different ways of collecting and processing data and information under specific disciplines, and help them in arriving at conclusions and generating new insights and knowledge in the process
- to promote problem-solving abilities and creative thinking in the citizens of tomorrow; to cope with the changing demands of a society committed to use science, technology and informatics; and
- to assist students to explore their interests and aptitudes in order to choose appropriate careers for shaping their future

3. Guiding principles of National Curriculum Framework (2005) for state level curriculum reforms and textbook development are:

- Connecting knowledge to life outside the school
- Ensuring that learning is shifted away from rote methods
- Enriching the curriculum to provide for overall development of children rather that remain textbook centric
- Making examinations more flexible and integrated into classroom life and
- Nurturing an over-riding identify informed by caring concerns within the democratic polity of the country.

UNIT III PRINCIPLES OF CURRICULUM CONSTRUCTION

Structure

3.1 INTRODUCTION

Every profession demands certain specific skills and competence on the part of practitioners. Teaching is a profession, teachers should demonstrate certain skills and competencies which can influence learning in the students and help them achieve their goals of life. The point of emphasis here is that the B.Ed. programme should instill certain specific skills in you, as in-service student of education. As you working as a teacher, the programme should sharpen your skills to become an effective teacher at the secondary / senior secondary stages. The desired skills and competencies are not only enough in the teaching and establishing learning in class room situation and to be extended to the planning of curriculum also. The inputs provided in the B.Ed. programme will help you in sharpening your knowledge in terms of construction of curriculum and principles of curriculum. The exercises and assignment which have been planned and executed sufficiently in terms of

construction of curriculum with basic principles locate a very good platform for understanding curriculum construction of different levels. In this unit, we will discuss the principles of constructing the curriculum and the recommendations of the different commissions for different stages of the school curriculum along with the issues related to the curriculum construction in the instructional fields.

3.2 OBJECTIVES

After going through this unit, you will be able to:

- Understand the principles of Curriculum Construction
- Construct the curriculum to the given subject to the stage of Primary or Secondary Stage
- Analyze the recommendation of the different education commissions on school Curriculum
- Highlight the influence of Kothari Education Commission on school education systems
- evaluate the present school curriculum critically
- Address the different curricular issues related to instructional fields

3.3 PRINCIPLES OF CURRICULUM CONSTRUCTION

In the construction and organization of the Curriculum for any discipline, we usually mean to think about the type of learning experiences to be given to the pupils at various age and levels for the realization of the goals at their level and age. The term construction is not an ordinary one, which needs a careful attention where the mission to be employed with long term vision. It will need a systematic and sequential planning by keeping in view the principles of integration.

- **Principle of Child-Centered Education:** Curriculum should be child-centered. In other words, while constructing a suitable curriculum, the interest, needs, capacities, abilities, age and the level of intelligence of children should be kept in full view and close attention.

- **Principle of relation with Life:** In the curriculum, only those subjects should be included which are relevant to actual living directly. The old and prevalent curriculum is under heavy fire only because to its irrelevancy the actual living conditions of children.
- **Principle of Utilizing Creating and Constructive Powers:** Those subjects should be assigned prominent place in the curriculum which develop the creative and constructive capacities and abilities of children. Rayment rightly says " In a curriculum that is suited to the needs of today and of the future, there must be a definite bias towards definite subjects"
- **Principle of Interaction of Play and Work Activities:** While constructing a curriculum, the learning activities and experiences, it should be made so much interesting that a child gains experiences knowledge and learning from them in the play way spirit, thinking them as very interesting and captivating. According to Crow and Crow "the aim of those who guide the learning process should be so as to plan learning activities that the play attitude is introduced.
- **Principle of Knowledge of Culture and Civilization:** The curriculum should include those subjects, activities and experiences which convey to the children the knowledge and understanding of their cultural values and civilization. In other words curriculum should preserve and develop culture and civilization.
- **Principle of Totality of Experiences:** The curriculum should include the integrated whole of human experiences as one unit. In other words, curriculum should include the both the literacy and academic subjects as well as the sum total of varied human experiences which a child receives in the school campus in the classrooms, on the playing fields, in the libraries and laboratories and through the various informal contacts with the teachers and other educationists. The secondary education commission report also emphasizes this as "curriculum does not mean only the academic subjects, but it includes the totality of experiences'.

- **Principle of Wholesome Behavior Pattern:** Curriculum subjects, activities and experiences should inculcate in the children social and moral qualities which shape curious behavior towards others. Crow and Crow aptly remarks "the curriculum should be so framed that it may help the children in the achievement of wholesome behaviour patterns".
- **Principle of Utility:** Curriculum should include those subjects, activities experiences which are useful to the present life as well as the future life of the children. Irrelevant and useless materials should find no place in the curriculum. There is enough dead wood in the curriculum of modern times, which need to be removes and replaced by needful and relevant materials.
- **Principle of Future Orientation:** Curriculum subjects and materials should be forward looking so that the child is able to solve the various problems are to come before him in the immediate as well as remote future, and also to find out suitable and achieve harmonious adjustment with the changing conditions and situations of life in a progressive way. This capacity for adjustment should also enable the child to codify environment according to his needs.
- **Principle of Variety and Flexibility:** Different children have different inherent interests, aptitudes, urges, tendencies, capacities and abilities. In view of this variations and differences, there should be enough flexibility and elasticity in the curriculum to suit the varieties. The secondary education commission report (1952) expresses the view as "there should be enough variety and elasticity in the curriculum to allow for individual differences and adaptation to individual needs interest".
- **Principle of Education for Leisure:** The problem of utilization leisure time gainfully is of considerable magnitude in modern times. It is generally notices that people have no plan to spend this time effectively. They often waste it or rather kill it. A good curriculum should develop capacities in the children to spend their leisure time in

a useful manner as they spend the busy time in various developmental activities.

- **Principle of Inclusive of All Activities:** According to Herbert Spencer, the prime aim of education is to achieve complete development of individuality. Hence in the curriculum all those activities and subjects should be included which promote physical, mental, moral social and political development of a child in a harmonious manner.
- **Principle of Relationship with Community Life:** While constructing curriculum, full consideration of local needs and situations should be kept in mind. Not only this, all those social beliefs, attitudes, traditions and problems of community life should be given due place to make children understand them well realize their responsibility towards them. The secondary education commission report also lays down "the curriculum should be vitally and organically related to community life".
- **Principle of Development of Democratic Spirit:** India has accepted the ideal of a democratic republic. Hence curriculum should contain and emphasize those activities and experiences which promote in the children democratic spirit, feelings and attitudes together with democratic behavior patterns based on democratic ideals and values.
- **Principle of Correlation:** The impact of importance of curriculum is destroyed. It is broken in to unrelated and fragments and unconnected units. On the other hand if the integrated approach employed in teaching various subjects, then this correlation leads to wider and deeper understanding and wholesome knowledge. Hence, the curriculum should be kept various interrelated and lay stress upon correlation, so essential and so vital to effective and successful teaching.

3.4 HISTORY OF CURRICULUM RECONSTRUCTION

India is a free nation with a rich variegated history, an extraordinarily complex cultural diversity and a commitment to democratic values and well-being for all. Ever since 1986 when the National Policy on Education was approved by Parliament, efforts to redesign the curriculum have been focused on the creation of a national system of education. In order to realize educational objectives, the curriculum should be conceptualized as a structure that articulates required experiences. For this, it should address some basic questions:

- What educational purposes should the schools seek to achieve?
- What educational experiences can be provided that is likely to achieve these purposes?
- How can these educational experiences be meaningfully organized?
- How do we ensure that these educational purposes are indeed being accomplished?

India is a multicultural society made up of numerous regional and local cultures. People's religious beliefs, ways of life and their understanding of social relationships are quite distinct from one another. All the groups have equal rights to co-exist and flourish, and the education system needs to respond to the cultural pluralism inherent in our society. To strengthen our cultural heritage and national identity, the curriculum should enable the younger generation to reinterpret and re-evaluate the past with reference to new priorities and emerging outlooks of a changing societal context. Understanding human evolution should make it clear that the existence of distinctness in our country is a tribute to the special spirit of our country, which allowed it to flourish. The aims of education serve as broad guidelines to align educational processes to chosen ideals and accepted principles. The aims of education simultaneously reflect the current needs and aspirations of a society as well as its lasting values, and the immediate concerns of a community as well as broad human ideals. At any given time and place they can be called the contemporary and contextual articulations of broad and lasting human aspirations and values. Educational aims turn the different activities undertaken in schools and other educational institutions into a

creative pattern and give them the distinctive character of being ‘educational’. An educational aim helps the teacher connect his/her present classroom activity to a cherished future outcome without making it instrumental, and therefore give it direction without divorcing it from current concerns. Thus, an aim is a foreseen end: it is not an idle view of a mere spectator; rather, it influences the steps taken to reach the end. An aim must provide foresight. It can do this in three ways: First, it involves careful observation of the given conditions to see what means are available for reaching the end, and to discover the hindrances in the way. This may require a careful study of children, and an understanding of what they are capable of learning at different ages. Second, this foresight suggests the proper order or sequence that would be effective. Third, it makes the choice of alternatives possible. Therefore, acting with an aim allows us to act intelligently. The school, the classroom, and related learning sites are spaces where the core of educational activity takes place. These must become spaces where learners have experiences that help them achieve the desired curricular objectives.

An understanding of learners, educational aims, the nature of knowledge, and the nature of the school as a social space can help us arrive at principles to guide classroom practices. The main areas relevant for curricular planning have remained remarkably stable for a long time, despite major changes in social expectations and the academic study of different broad disciplines. It is important that each curricular area is revisited in depth, so that specific points of entry can be identified in the context of emerging social needs. In this respect, the status and role of the arts and health and physical education deserve special attention in view of the peculiar orbit of the 'extra-curricular' to which they were relegated almost a century ago. Aesthetic sensibility and experience being the prime sites of the growing child's creativity, we must bring the arts squarely into the domain of the curricular, infusing them in all areas of learning while giving them an identity of their own at relevant stages. Work, peace, and health and physical education have a similar case. All three have a fundamental significance for economic, social and personal development. Schools have a major role to play in ensuring that children are socialized into a culture of self-reliance, resourcefulness, peace-oriented values and health.

During the freedom struggle, the school curriculum was criticized to be an autocratic mould for producing white-collared English knowing persons. Ganthiji started craft-centered basic education as an alternative approach in tune with the Indian heritage. The report of the education commission (1966) sought to incorporate the best features of the basic education with emphasis on "internal transformation" of education in relation to the life, needs and aspiration of the country. The values enshrined in the constitution of Indian like socialism, secularism, democracy were gradually reflected in the education system in general and curriculum in particular.A pioneering step was taken by Gandhji to revamp and renovate the curriculum in order to suit to a modernized and egalitarian society. He suggested a scheme of Compulsory Education for which he developed the following curriculum:

- Craft spinning, weaving, gardening, book craft, leather work, clay and pottery, fisheries, etc.,
- Mother Tongue
- Social Studies
- Mathematics
- General Sciences
- Art including Drawing, Music, Aesthetics
- Hindi and
- Games and Physical Activities

Check Your Progress 1

Notes: a. Write your answers in the space given below.
b. Compare your answers with those given at the end of this unit.

1. Define 'principle of child-centered education'. .

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.....

2. What should be the main aim of education?

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3. What is Ganthiji stated his view in basic education?

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……..
……...

3.5 SECONDARY EDUCATION COMMISSION (1953)

The Secondary Education Commission (1953) pointed out that the curriculum for secondary schools had been narrowly conceived, bookish and theoretical. It was over crowded and made inadequate provision for practical and other kinds of activities in order to educate the whole of the personality. It was dominated too much by examinations and did not include technical and vocational subjects in order to enable students to share effectively in the industrial and economic development of the country. The commission, therefore, suggested the following broad lines of the middle school curriculum for educating children in citizen and productivity:

- Language (Mother tongue, Regional Language and Hindi)
- Social Studies
- General Science
- Mathematics
- Arts and Music
- Craft and
- Physical Education

The following broad lines of curriculum were suggested by the commission for high schools:

A. i. Mother tongue or Regional language or composite course of the mother tongue and a classical language.

   ii. One other language to be chosen from among the following:

   Hindi (for non Hindi areas), Elementary English, Advanced English, a modern Indian Language, a foreign modern language (other than English), a classical language

B. i. Social Studies, general course for first two years only.

   ii. General Science including Mathematics for first two years only

C. One Craft to be chosen from the following list:

   - Spinning and Weaving
   - Wood work
   - Metal Work
   - Gardening
   - Tailoring

- Typography
- Workshop Practice
- Sewing Needlework and Embroidery
- Modeling

D. Three subjects from one of the following:
   - Humanities
   - Sciences
   - Technical
   - Commercial
   - Agriculture
   - Fine arts
   - Home Sciences

E. Besides the above a student may take at his option one additional subject from any of the above groups irrespective of whether or not he has chosen his other options from above particular group.

3.6 KOTHARI EDUCATION COMMISSION (1966)

Kothari Education Commission (1966) emphasizing "internal information" of education suggested the following measures for curriculum reconstruction:

- Most of the curricular revision attempted so far has been an ad hoc character and no careful research undertaken earlier to it. So the step to be taken is systematic curricular research. The finding of the experts instead of haphazard and whimsical action, should not lead to curriculum changes.
- Curricular revision could not be followed by preparation of suitable learning materials. But production of suitable text books is basic to the success of any curricular improvement.
- Curricula were used to be prepared at the state schools and were prescribed uniformly for all schools of the state. So no teachers were involved in the process of curriculum development. Hence, they should be adequately associated with the process of curricula.

- Since teachers are to be playing a crucial role they have the new curriculum. Besides their teacher competence and skills should be improve in order to justice to the new curricula. Hence, and extensive programme of in- service education consisting of seminars and refresher courses should be organized for orienting teachers with the revised curricula.
- A curriculum should be related to the quality of teacher, the facilities available in the school and the needs of the students with reference to their socio- economic background.
- Schools should be encouraged to try out experimental curricula. As there is need for greater initiative and more competence on the part of the school, a liberal attitude and proper understanding of the management ad well as curricula are necessary.
- Advance curriculum should be prepared and introduced progressively in all the schools and all the subjects through a phased programme spread over a number of years. Ordinary curriculum should be used by the majority of schools and advanced curriculum by good schools with adequate facilities.
- Subject teacher association would be encouraged for different school subject and these would help in stimulating initiative, experimentation and upgrading the curriculum.
- The commission suggested a curriculum of the first ten years of schooling and a scheme of multi- purpose schools. The following are the broad areas of curriculum of curricular studies for various stages by the commission.

Lower Primary Stage (Classes I-IV)

i. One language: Mother Tongue or Regional Language

ii. Mathematics

iii. Study of the environment (covering science and social studies in classes III and IV)

iv. Creative Activities

v. Work Experience and Social Service and

vi. Health education

Higher Primary Stage (Classes V-VII)

i. Two languages

a. One is Mother Tongue and other is Regional Language, and

b. Another one is Hindi or English

(**Note:** A Third Language, e.g. English, Hindi or regional language e.g. English, Hindi or regional language may be studied on optional basis)

ii. Mathematics

iii. Science

iv. Social studies (History, Geography and Civics)

v. Art

vi. Work Experience and Social Service

vii. Physical Education and

viii. Education in Moral and Spiritual Values

Lower Secondary Stage (Classes VIII-X)

i. Three languages

(In Non Hindi speaking areas)

- Mother Tongue or the Regional Languages
- Hindi at a higher or lower level
- English at a higher or lower level

(In Hindi speaking areas)

- Mother Tongue or Regional Language
- English or Hindi if English has already been taken as the mother – tongue
- A Modern Indian language other than Hindi

(Note: A classical language may be studied in addition to the above three language on an optional basis)

ii. Mathematics

iii. Science

iv. History, Geography and Civics

v. Art

vi. Work Experience and Social Service

vii. Physical Education and

viii. Education in Moral and Spiritual Values

The commission laid stress on the "Vocationalization of Secondary Education" and for this it suggested a long list of subjects. In this context, Kochar (1981) has aptly observed, "Thus it is obvious that commission was mainly guided by two schools of philosophy – Pragmatism and Essentialism by outlining a programme of vocational education it relied on pragmatism. It further advocated that the school curriculum should be geared to the essentials or fundamentals". "The commission underlined national development as one of the most important concern of education and visualized it as an instrument of peaceful scale". The new curricula were suggested by the commission for realizing these objectives.

During succeeding years nation – wide discussions were made on formulation of new curricula for various published by the NCERT in 1975. It emphasized adequate flexibility and dynamism in its provisions for coping with expanding frontiers of knowledge and changing socio- economic conditions of our society. It has rightly remarked, "Curriculum renewal should not be a sporadic and periodic effort. It has to be a necessary component of any curriculum development at any stage. This means that educational system of a state (as well as at the Centre) has to have a built- in mechanism for curriculum renewal". The school curriculum has to be made relevant and related to social justice, national integration, productivity, modernization and cultivation of desired value.

The report of the International Commission on Education of UNESCO entitled "Learning to be" says that for a long time in the human and work. When one goes to schools, segregated from life and work; when one goes to schools, does not work and when goes to work, does not read. This dichotomy between work and education is unnatural and should be done away with. This report also emphasized self- learning, and use of new methods, media and materials for the purpose. That is why, the NCERT besides endorsing the above views, has laid stress on education of dropouts, multiple entry, semester system, core curriculum, modernized textbooks and other learning materials, etc. for realizing these objectives.

The scheme of the areas of school work and the time allocation as suggested by the NCERT are as follows:

Areas of School Work Classes I and II	**Percentage of Total Time**
1. First Language	25
2. Mathematic	10
3. Environmental Studies-I (Social Studies and General Sciences)	15
4. Work Experience and Art	25
5. Health education and Games	25
Total	**100**

Classes III,IV and V	**Percentage of Total Time**
6. First Language	25
7. Mathematic	15
8. Environmental Studies-I(Social studies)	10
9. Environmental Studies-II (General Sciences)	10
10. Work experience and Art	20
11. Health Education and Games	20
Total	**100**

Classes VI, VII and VII	**Periods**
1. First language continues	8
2. second language is added (Hindi or English)	5
3. Mathematic (including Algebra, and Geometry	7
4. Social Science (History, Geography and Civics)	6
5. Science (Physical and Life sciences)	7
6. Work experience	4
7. The Arts	5
8. Physical Education and Games	6
Total	**48**

Classes IX, and X	Periods
1. First and Second Language continued and a Third Language added (English or any other Indian language)	6 5 2
2. Mathematic (including Algebra, and Geometry)	7
3. Science (Physical and life science	7
4. Social science (including History, geography and civics)	7
5. Work experience	5
6. The Arts	3
7. Physical education and Games	6
Total	**48**

The above timing distribution and scheduling is tentative as well as suggestive.

The Iswarbhai Patel Commission set up reappraisal of the NCERT ten years school curriculum suggested for three main components of the curriculum- Humanities, Science and Socially Useful Productive Work (SUPW). The following curriculum pattern along with time allocation was given by the committee for the different of school education:

Classes I- V	Time Allocation
1. One Language	20 per cent
2. Mathematics	20 per cent
3. Environmental studies (social studies, natural study and Health education)	20 per cent
4. Socially Useful Productive Work (SUPW)	20 per cent
5. Games and Creative Activities(Music, Dance and Paintings)	20 per cent
Total	**100 per cent**

Classes V - VIII	Time Allocation
1. Languages	7 Hours
2. Mathematics	4 Hours
3. History, Geography and Civic	4 Hours
4. Science – an integrated course	4 Hours
5. Games and creative activities(music, dance and paintings)	3 Hours
6. Community service	6 Hours
7. Games, physical education and supervised study	4 Hours
Total	**32 Hours**

Classes IX-X	Time Allocation
1. Languages	8 Hours
2. Mathematics alternative I or II	4 Hours
3. Science, Alternative I(theory and practical) or alternative II	5 Hours
4. History, civics and Geography (as one group)	3 Hours
5. One of the following Art (Music, Dancing, Painting etc,) Home science, Agriculture, commerce, Classical, Reconstruction, Classical language.	2 Hours
6. Socially Useful Productive Work and Community service	6 Hours
7. Games, physical education and supervised study	4 Hours
Total	**32 Hours**

The National Review Committee for +2 curriculum under the chairmanship of Malcolm S.Adiseshiah recommended the curriculum for General Education and Vocational Spectrum. The allocation of time for the general education spectrum at the +2 stage as follows:

Course Content	Time Allocation
1. Language	15 per cent
2. Socially Useful Productive Work	15 per cent
3. Electives	70 per cent

The elective suggested by the committee are: Languages, (i) other than one offered as a compulsory Language, Mathematics, Economics, Chemistry, Political Science, Geography, Sociology, Biology, Philosophy, History, Physics, Fine arts, Physical Education, Commerce and Accountancy, psychology, and Home science.

3.7 NATIONAL POLICY ON EDUCATION (1986)

The National Policy on Education was framed in 1986 and modified in 1992. Since then several changes have taken place that calls for a revision of the Policy. The Government of India would like to bring out a National Education Policy to meet the changing dynamics of the population's requirement with regards to quality education, innovation and research, aiming to make India a knowledge super power by equipping its students with the necessary skills and knowledge and to eliminate the shortage of manpower in science, technology, academics and industry. The National Policy on Education, 1986 has called for changes in the curriculum at various stages. It emphasized, 'The curricula and process of education will be enriched by cultural, content in many manifestations as possible. Children will be enable to develop sensitivity to beauty, harmony and refinement" in this context, National Curriculum for Primary and Secondary Education-A framework" 1985 was developed by NCERT as a result of quick appraisal of the existing curricula and discussions as well as deliberations by various working groups, steering committees and Seminars at the national level. The much cherished constitutional imperative, socio cultural factors, pedagogical concern, etc. were taken in to consideration in this connection. The National Curriculum Framework (1985) has the following basis features.

- Emphasis on the attainment of the personal and social goals and propagation of values enshrined in the constitution.
- The development of human resources for the realization of the national goals of development
- Broad based general education in all learners at the primary and secondary stages.
- Learner centered approach rather than the teacher centered approach to the transaction of the curriculum.
- Provision for flexibility in terms of selection of content and leaning expression which would facilitate the attainment of the expected learning outcomes.
- Applicability of the curriculum to all learners irrespective of their modes of learning.
- Provision of threshold resources necessary for effective transaction of the academic in all schools/ non formal learning centers.

i. Pre-Primary Education

The basic mode of learning of children at this stage should be through activities and play way techniques, language games, number games and activities and directed to promote environmental awareness, etc. these should be used to make the learning experience joyful to children. No formal teaching of subjects should be undertaken at this stage.

a. Lower Primary stage

Subject	Percentage of Time Allocation
• Languages the Mother Tongue or Regional Language	30
• Environmental studies	15
• Mathematics	15
• Work experience and socially useful productive work (SUPW)	20
• Art Education	10
• Health and Physical Education	10
Total	**100**

b. Upper Primary stage

Subject	Percentage of Time Allocation
1. Three languages	32
2. science	10
3. Mathematics	12
4. Social sciences	12
5. Work experience / Socially Useful Productive Work (SUPW)	12
6. Art Education	10
7. Health and Physical Education	12
Total	**100**

ii. Secondary Stage

Subject	Percentage of Time Allocation
1. Three languages	30
2. Science	8
3. Mathematics	12
4. Social sciences	12
5. Contemporary India	6
6. Work experience / Socially Useful Productive Work (SUPW)	12
7. Art education	8
8. Health and Physical Education	12
Total	**100**

The implementation of the national curriculum in a systematic manner by the educational authorities would be to a great extend depend on the creation of a favorable climate both within the education system and at the societal levels. The present organization structure should be made more efficient through suitable measures administrative as well as academic. In order to provide professional guidance at different stages of implementation, administrative programmes need be planned, organized, evaluated and coordinated by dedicated groups responsible for providing professional guidance at different

levels of implementation. A large number of institutions should be identified at various levels for providing technical support and expertise.

The national curriculum needs to be realized in action through various instructional materials, appropriate teaching, and learning and evaluation norms. The national, state and other educational authorities have to be strongly committed and deeply involved in these programmes. The curriculum guides, model syllabi and exemplary materials are being produced by the NCERT at the national level. Necessary review materials are being undertaken for bringing about desired improvements.

3.8 NATIONAL KNOWLEDGE COMMISSION (NKC) -2005

The ability of a nation to use and create knowledge capital determines its capacity to empower and enable its citizens by increasing human capabilities. In the next few decades, India will have the largest set of young people in the world. Following a knowledge-oriented paradigm of development would enable India to influence this demographic advantage. In the words of our Prime Minister, "The time has come to create a second wave of institution building and of excellence in the field of education, research and capability building so that we are better prepared for the 21st century."

With this broad task in mind, the National Knowledge Commission (NKC) was constituted on 13th June 2005 with a time-frame of three years, from 2nd October 2005 to 2nd October 2008. As a high-level advisory body to the Prime Minister of India, the National Knowledge Commission has been given a mandate to guide policy and direct reforms, focusing on certain key areas such as education, science and technology, agriculture, industry, e-governance etc. Easy access to knowledge, creation and preservation of knowledge systems, dissemination of knowledge and better knowledge services are core concerns of the commission.

Objectives

The overarching aim of the National Knowledge Commission is to enable the development of a vibrant knowledge based society. This entails both a radical improvement in existing systems of knowledge, and creating avenues for generating new forms of knowledge. Greater participation and more equitable access to knowledge across all sections of society are of vital importance in

achieving these goals. In view of the above, the NKC seeks to develop appropriate institutional frameworks to:

- Strengthen the education system, promote domestic research and innovation, and facilitate knowledge application in sectors like health, agriculture, and industry.
- Leverage information and communication technologies to enhance governance and improve connectivity.
- Devise mechanisms for exchange and interaction between knowledge systems in the global arena.

The National Knowledge Commission deliberations have focused on five key areas of the knowledge paradigm – access to knowledge, knowledge concepts, knowledge creation, knowledge application and development of better knowledge services.

i. Access to Knowledge

Providing access to knowledge is the most fundamental way of increasing the opportunities and reach of individuals and groups. Therefore, means must exist for individuals who have the ability to receive and comprehend knowledge to readily obtain it. This also includes making accurate knowledge of the state and its activities available to the general public. Certain issues that are being examined in this context by the National Knowledge Commission are:

- Right to Education
- Language
- Translation
- Libraries
- Networks
- Portals

ii. Knowledge Concepts

Knowledge concepts are organized, distributed and transmitted through the education system. It is through education that an individual can make better informed decisions, keep abreast of important issues and trends around him or her and most importantly, question the socio-economic arrangements in a

manner that can lead to change and development. NKC's concern with many aspects of the Indian education system covers:

- School Education
- Vocational Education
- Higher Education
- Medical Education
- Legal Education
- Management Education
- Engineering Education
- Open and Distance Education
- Open Educational Resources
- More Talented Students in Mathematics and Science
- More Quality Ph. D's

iii. Creation of Knowledge

A nation can develop in two ways – either it learns to use existing resources better, or it discovers new resources. Both activities involve creation of knowledge. This makes it important to consider all activities that lead to the creation of knowledge directly or help in protecting the knowledge that is created. India must therefore examine issues such as:

- Science and Technology
- Legal Framework for Public Funded Research
- Intellectual Property Rights (IPRs)
- Innovations
- Entrepreneurship

iv. Knowledge Applications

Knowledge can be productively applied to promote technological change and facilitate reliable and regular flow of information. This requires significant investment in goal-oriented research and development along with access models that can simplify market transactions and other processes within an industry. Initiatives in the areas of agriculture, small and medium enterprises (SMEs) and traditional knowledge can demonstrate that knowledge can be very effectively applied for the betterment of the rural poor:

- Traditional Knowledge
- Agriculture
- Enhancing Quality of Life

v. Delivery Services

Knowledge services have the potential to simplify many different points at which citizens interact with the State. Traditionally, these points of interaction have been vulnerable to unscrupulous activities and rent-seeking. Technology provides us with an opportunity to ensure accountability, transparency and efficiency in government services. E-governance is one of the ways in which citizens can be empowered to increase transparency of government functioning, leading to greater efficiency and productivity. The methodology followed by the NKC is as follows:

- Identification of key focus areas.
- Identification of diverse stakeholders and understanding major issues in the area.
- Constitution of Working Groups of experts and specialists; organization of workshops, extensive formal and informal consultations with concerned entities and stakeholders
- Consultation with administrative Ministries and the Planning Commission
- Discussion in NKC to finalize recommendations in the form of letter to the PM from the Chairman, NKC
- Letter to PM containing key recommendations, first steps, financial implications etc. The letter will be supported by the relevant explanatory documents.
- Widespread dissemination of NKC recommendations to state governments, civil society and other stakeholders, also using the NKC website
- Initiating the implementation of the recommendations under the guidance of the PMO.
- Finalizing the recommendations based on stakeholder feedback and coordinating /following up the implementations of proposals

Check Your Progress 2

Notes: a. Write your answers in the space given below.
b. Compare your answers with those given at the end of this unit.

1. What kind of crafts recommended by Secondary Education Commission?

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2. What are the strategies in choosing languages at lower-secondary level recommended by Kothari commission?

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3. What was preferred by National Review Committee for +2 level curriculum?

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4. What will be necessitates providing professional guidance at different stages?

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……

5. List down the issues is being examined by National Knowledge Commission?

……
……
……

3.9 CURRICULAR ISSUES

Change is an important component of curriculum dynamics and we have to study and manage change for a better future. In order to cope with change and the emerging problems, we have to accept a contemporary and proactive conception of problem solving in a life-long process, predicting future problems, thinking of their solutions and the actualization of these processes for the betterment of individuals, society and culture. Curriculum development as a problem solving process involves the critical consideration of resources, needs and problems for improvement purposes. Curriculum is a reflection and a product of the society and can contribute to changing the society.

In this respect it is necessary to reflect on the issues to reach decisions in a dynamic and responsive curriculum development and education process. Five selected issues from each area are given below:

i. Holistic Curriculum Conception (planning, implementation, evaluation)

- How can we improve the evaluation of short-term field testing and curriculum implementation?
- How can we involve the teachers in the curriculum planning process and what types of competences should the members of the curriculum planning teams possess?
- Why is curriculum planning not actualized fully and effectively in the schools by teachers and professionals in a bottom to top approach?
- Are teachers equipped with the necessary competencies to implement learner-centered curricula?
- In what ways do the curriculum models interact with existing instructional practices? Why should we consider the reflection of curricular changes on the staff?

ii. Continuous Professional Development of Curriculum Experts

- How can we motivate individuals for self-improvement in curriculum and instruction?
- To what extent does classroom based curriculum development incorporate with continuing professional development of teachers?
- How can we manage effective and continuing professional development?
- Are university-school partnerships established?
- Is there a reward system established to increase the motivational level of teachers who professionally develop themselves on a regular basis?

iii. Relating Curriculum Theory to Research and Practice

- How can we establish standards for curricular research and practice?
- How can we involve and coordinate different groups (students, parents, teachers, political powers)?
- How can we improve the research base reflecting the Indian educational context?

- How can we train different parties involved in the process as researchers and practitioners?
- How can we establish school/institution-based research for curriculum development?

iv. Consideration of Foundations

- How can we reflect regional characteristics and issues in the school curriculum?
- To what extent are the cultural characteristics of different nations reflected in the curriculum?
- Can the students think critically about the global and intercultural issues?
- Is there a balance in the reflection of national and global needs in the curriculum?
- When planning and implementing the curriculum, to what extent are learners' developmental level, interests, and abilities taken into consideration?

v. Issues related to Newly Emerging Areas

- Are we aware of the nature and importance of hidden curriculum?
- Is there a danger in hidden curriculum in relation to imposing an external pressure on individuals for social adaptation?
- How can we take individual differences into account in hidden curriculum?
- How can we establish horizontal and vertical integration of disciplines, contexts and individuals?
- How can we relate students' different background characteristics and past experiences to an integrated curriculum?

3.9.1 Issues related to Language

Language curriculum development should be considered the following aspects initially:

- Starts with the notion of syllabus design
- A major factor in language teaching
- Content of a course
- The key of stimulus in teaching methods' change

Language curriculum development includes more issues than syllabus design, they are:

- The needs of learners
- Objectives for a programme
- Appropriate syllabus, course structure, teaching methods, and materials
- Evaluation of the language programme

The following are the aspects of Selection before the curriculum development in language:

- Vocabulary selection
- Grammar selection
- The foundations for syllabus design in language teaching

3.9.2 Issues related to Science

The rapid advances in science and technology, newly established societal and cultural norms and values, and changes in the climate and environment, as well as, the depletion of natural resources all greatly impact the lives of children and youths, and hence their ways of learning, viewing the world, experiencing phenomena around them and interacting with others. These changes challenge science educators to rethink the epistemology and pedagogy in science classrooms today as the practice of science education needs to be proactive and relevant to students and prepare them for life in the present and in the future. Different views of curriculum implementation, ranging from cooperative to authoritarian, are considered. In this context, perceptions of past, present, and future science curriculum implementation are examined to reveal the changing patterns of science curriculum implementation.

Students who are proficient in science be expected to:

- know, use, and interpret scientific explanations of the natural world
- generate and evaluate scientific evidence and explanations
- understand the nature and development of scientific knowledge
- Participate in scientific practices and discourse productively

These four strands of science education were judged in the report to be of equal importance. Yet what is taught in most schools today, from kindergarten through introductory college classes, focuses almost exclusively on only a

portion of the first of the four strands: teaching students to know scientific explanations of the natural world. Without proper skills up to date information and knowledge a teacher faces problems in Science curriculum development, 'National Curriculum is Skeleton' which needs the flesh of the real world and the 'life force' of the teachers to bring it alive (Jerry Wellington). Within the framework, teachers have flexibility in the way they present science, for example, as essentially about processes and methods or in content, as a body of emulated knowledge. They can also decide whether they present the various sciences as integrated whole or as separate disciplines.

Another key issue that concerns all those involved in planning science courses in schools and in designing science curriculum is the balance between process and content. The process led approach can be qualified on following grounds:

- The content led approach lies failed
- Science for all abilities necessitates a process based curriculum
- The information explosion has made the teaching of facts highly questionable
- Scientific facts data too quickly to form the basis for science curriculum

There are three imperative that must be considered while develop science curriculum, they are:

- Science discipline imperative
- Individual imperative
- Societal imperative

Science discipline imperative means that science curriculum based on both process and product aspect of science the traditional science courses which are dedicated to covering an encyclopedia of correct answer and showing the structure of a particular science discipline tend to cover as many facts as possible. Modern science curriculum development put great emphasis on the skills to develop science curriculum in addition to imparting knowledge to student. But despite their wide spread recognition and importance, process skills are neglected in typical curricula, one reason is that many teachers are not trained to teach these skills to students, these must be balanced between process and product approach of science teaching, because both those aspect

or in separate components of science. Development of science process skill need, a proper subject matter context.

3.9.3 Issues related to Humanities

The Humanities include a broad range of subjects to do with the study of human culture – for example, archaeology, religious studies (theology), history, philosophy; literature and languages. Humanities are academic disciplines that study human culture. In the middle Ages, the term contrasted with divinity and referred to what is now called classics, the main area of secular study in universities at the time. Today, the Humanities are more frequently contrasted with natural, physical and sometimes social sciences as well as professional training. The humanities can be described as the study of how people process and document the human experience. Since humans have been able, we have used philosophy, literature, religion, art, music, history and language to understand and record our world. These modes of expression have become some of the subjects that traditionally fall under the humanities umbrella. Knowledge of these records of human experience gives us the opportunity to feel a sense of connection to those who have come before us, as well as to our contemporaries. The field of humanities includes studies that qualitatively, rather than quantitatively, investigate the human experience. Some scholars feel that the humanities address the central questions of human life. According to the National Endowment for the Humanities, the field of humanities includes, but is not limited to, the following subjects:

- Modern languages
- Classical languages
- Linguistics
- Literature
- History
- Jurisprudence
- Philosophy
- Archaeology
- Comparative Religion
- Ethics
- History, Criticism and theory of the Arts

Some sources include the classics within the humanities, defining the classics as the foundational literature of earlier civilizations. Additionally, schools now incorporate more contemporary areas. Authorities sometimes differ on exactly what subjects should be considered part of the humanities. Almost all of them exclude science and mathematics. Some include all or most of the social sciences; others include only those social sciences they feel to be humanistic in content and method. The visual and performing arts are often included in the humanities; in some cases, they're given a separate designation, as in the term, ‘arts and humanities’. A field of study in humanities often includes questions that many have contemplated and attempted to answer. Here are some questions which the humanities might address:

- How do human beings behave?
- Why do they behave this way?
- How do human beings interact with each other?
- How do human beings interpret the world around them?
- What kind of political, social and cultural institutions do they form?

Science and mathematics may be said to employ objective and empirical methods to investigate the natural world. In contrast, the humanities are studies that use subjective and rational methods to investigate the human world. The tools of the humanities are not controlled experiments and precise measurement; they are rational analysis, emotional insight and imagination. Humanities is a broad academic field under which students study various types of human interactions, using methods that are largely analytical, critical or exploratory. Humanities contain something explicit to explore in it. As it serves several disciplines, human beings and the society focus on different kinds of studies. Humanities are also referred to ‘Integrated Humanities’ which states this stream as the study of History and Geography with Religious Education, Sociology, Psychology, Government and Politics and sometimes Law. It is also regarded as the subject where many humanities courses are taught in lectures and seminars. As the new are of Humanities education was developed, it was marked by the growth pains that often accompany new endeour. Further, if a humanity education as the passage of time has shown is to assert itself as a viable subject matter field, it must resolve issues which

have and will continue to understand its effectiveness. In need of attention are five issues:

- The nebulousness of Humanities Education makes it difficult if not possible, to define boundaries
- There appear to be few standard objectives for the teaching of the Humanities
- There appear to be few expectations in the preparation of Humanities teachers
- Little direction at present, is given by state education agencies in the preparation of Humanities teachers or in recognizing human education as a direct subject matter field
- The financial squeeze now being felt in schools may result in relegation of Humanities Education to the 'frill' category

When Humanities Education accept some boundaries to their field; when there emerges some core of skills associated with Humanities Education, whether they may be cognitive or affective; when Universities offer a commonality in the preparation of Humanities teachers; when the state agencies act in consort with Humanities teachers; and when Humanities Education can justify its existence, then it can assume a longevity now accorded to its cousin subject matter fields. But these issues cannot be moved away; they must be faced squared and presently to ensure the acceptance Humanities Education as a viable teaching field.

Check your progress 3

Notes: a. Write your answers in the space given below.
b. Compare your answers with those given at the end of this unit.

1. What are the five areas of issues in Curriculum Framework?
   .....
   .....
   .....
2. What are the expectations of proficient students from Science and give three main imperative in Science Curriculum Development?
   .....
   .....
   .....

3.10 LET US SUM UP

In this unit, the principles associated with the construction of curriculum development have been elaborately explaining. Curriculum development is a comprehensive term, inside cover: planning, implementation and evaluation. The principles will be used in curriculum development activities are essentially the rules or laws that would animate a curriculum. In curriculum development, not only involve people directly associated with education alone, but it has involved many people, such as politicians, businessmen, parents of students, teachers, and elements - other elements of society who feel concerned with education. The principles will be used in curriculum development activities are essentially the rules or laws that would animate a curriculum. In curriculum development, can use the principles that have developed in daily life or even creating their own new principles. Curriculum planning is the first step to build the curriculum when the curriculum workers to make decisions and take action to produce a plan that will be used by teachers and learners. Implementation of curriculum or curriculum implementation is also commonly referred to curriculum planning to transfer into operational action. Curriculum evaluation is the final step of curriculum development to determine how big the learning outcomes, level of achievement for programs that have been planned, and the results of the curriculum itself. The principles will assist teachers and schools in their practice and as a basis for continuing review, evaluation and improvement. They apply to the curriculum at national, education authority, school and individual levels. There were number of commission proven its role in providing suggestions and recommendation in curriculum development right from the beginning. In order to enhance the quality of education and educative process, the recommendations of Secondary Education Commission, Kothari Commission and National Education Policy were taken into execution and hence National Knowledge Commission stressed its contribution in curriculum construction qualitatively. Also, the issues related to curriculum development and implementation are to be considered and are to be analyzed and processed so as to make defined structure of curriculum for different level of educative process provided with the need and development of the society.

3.11 UNIT END ACTIVITIES

1. Analyse the State Board and CBSC syllabus of 8th Standard and critically expose your views and suggestions on them.

2. Collect the curriculum from lower primary to secondary level and give your suggestions in integrating educational technology with respect to the level of the students.

3.12 POINTS FOR DISCUSSION

1. Explain the principles of Curriculum construction with the examples.
2. Explain the contribution of Kothari Contribution in Curriculum construction.
3. What are the recommendations proposed by Secondary Education in constructing curriculum for upper primary level?
4. Briefly explain about the National Knowledge Commission.
5. Explain the issues related to curriculum construction with respect to:
   i. Language
   ii. Science and
   iii. Humanities

3.12ANSWERS TO CHECK YOUR PROGRESS

Check Your Progress 1

1. Curriculum should be child-centered. In other words, while constructing a suitable curriculum, the interest, needs, capacities, abilities, age and the level of intelligence of children should be kept in full view and close attention.

2. The main aim of education should reflect current needs and aspiration of a society as well as its lasting values and the immediate concerns of a community as well as human ideals. Also, the aim of education serves as broad guidelines to align educational processes to chosen ideals and accepted principles of education for its growth and development of individual and the nation.

3. Ganthiji stated his view in basic education is craft-centered education and it strongly believed that it is an alternative approach in tune with the Indian heritage.

Check Your Progress 2

1. Secondary Education Commission recommended the following crafts:

- Spinning and Weaving
- Wood work
- Metal Work
- Gardening
- Tailoring
- Typography
- Workshop Practice
- Sewing Needlework and Embroidery
- Modeling

2. As per Kothari commission, three language systems were recommended:

In Non-Hindi speaking areas:

- Mother Tongue or the Regional Languages
- Hindi at a higher or lower level
- English at a higher or lower level

In Hindi speaking areas:

- Mother Tongue or Regional Language
- English or Hindi if English has already been taken as the mother – tongue
- A Modern Indian language other than Hindi

3. According to National Review Committee for +2 curriculum, the allocation of time for the general education spectrum was:

Course content	**Time Allocation**
4 Language	15 per cent
5 Socially Useful Productive Work	15 per cent
6 Electives	70 per cent

The elective suggested by the committee are: Languages, (i) other than one offered as a compulsory Language, Mathematics, Economics, Chemistry, Political Science, Geography, Sociology, Biology, Philosophy, History, Physics, Fine arts, Physical Education, Commerce and Accountancy, psychology, and Home science.

4. There will be productive administrative programmes need to planned, organized, evaluated and coordinated by dedicated groups responsible for providing professional guidance at different levels of implementation. For this action, the steps have to be taken that A large number of institutions should be identified at various levels for providing technical support and expertise.

5. The issues being examined by the National Knowledge Commission are:

- Rights to Education
- Language
- Translation
- Libraries
- Networks
- Portals

Check Your Progress 3

1. The following are five selected issues:

- Holistic Curriculum Conception (planning, implementation, evaluation)
- Continuous Professional Development of Curriculum Experts
- Relating Curriculum Theory to Research and Practice
- Consideration of Foundations
- Issues related to Newly Emerging Areas

2. Students who proficient in science are expected to:

- know, use, and interpret scientific explanations of the natural world
- generate and evaluate scientific evidence and explanations
- understand the nature and development of scientific knowledge
- Participate in scientific practices and discourse effectively

The following are the three imperative in the development science curriculum;

- Science discipline imperative
- Individual imperative and
- Societal imperative

UNIT VI CURRICULUM CHANGE PLANNING AND TRANSACTION

Structure

4.1 INTRODUCTION

The speedy changes and increased complexity of today's world present new challenges and put new stress on our education system. There has been generally a growing consciousness of the necessity to change and improve the preparation of students for dynamic functioning in the continually changing and highly demanding environment. In confronting this challenge it is necessary to consider the complexity of the education system and the effective curriculum change with appropriate strategies associated with them. It is cleared that no simple and single uniform approach is enough to meet the challenge of the education in this techno-developing country. Also, it is evident that an effective curriculum transaction is in need of consideration of media and the agencies associated with them. In this unit, we will discuss the need of curriculum change from the beginning, strategies in transacting changing curriculum by considering role of media and agencies and the major

role of National Curriculum Framework in all aspects of curriculum framework and its implementation.

4.2 OBJECTIVES

After going through this unit, you will be able to:

- Understand the term 'Curriculum Change'
- Comprehend the factors influencing Curriculum Change
- Explain the importance of curriculum change
- Understand the Curriculum Planning
- Acquaint the Process of Curriculum Development
- Develop the skills on Curriculum Transaction
- Choose an appropriate Media for an effective Curriculum Transaction

4.3 CHANGING PARADIGM IN EDUCATION

The demand for change to meet the needs of a 2lst century educational programme is challenging even the best educational leaders. Today, most learning is functional or informational learning, which is oriented towards socialization and vocational goals that take no account of sustainability. This has been reinforced in Western as well as Indian educational systems by the introduction of a managerial view of education which has paralleled recent economic restructuring. This modernist educational paradigm derives from a broader social and cultural paradigm, which is fundamentally mechanistic and reductionist. There is a poor fit between this dominant paradigm and our experience of increasing complexity, interdependence, and systems breakdown in the world. Asserting education for sustainable development within the present educational framework can only meet with limited success, as such forms of educational changes through curriculum. The real need is to change from transmissive towards transformative learning, but this in turn requires a transformed educational paradigm. Educators for change need a clearer understanding of sociological, philosophical, psychological and technological and educational paradigm and culture can be developed. A key insight from complex systems is that simple solutions are not likely to be effective in cases such as the education system, and that providing a balance of

what seem to be opposites may provide the greatest opportunities for successful courses of accomplishment by considering the following:

- Integrating the universally polarized goals of education
- Adapting teaching to different student characteristics by using diverse methods of teaching
- Integrating the curriculum by developing inter-disciplinary curriculum through a unifying theme while having the opportunity to contribute in different and special ways to the objectives of the integrated units

4.4 CURRICULUM CHANGE

Curriculum is a runway for attaining goals of education. It is considered as a blueprint of an educational programme. Curriculum revision means making the curriculum different in some way, to give it a new point or direction. This often means modification to its philosophy by way of its aims and objectives, reviewing the content included, revising its methods and re-thinking its evaluation procedures. On the other hand, the basis for any major curriculum change is significantly to improve the existing curriculum. The Process of Curriculum change helps in the assessment of future needs of the existing curriculum along with a determination of what needs to be changed and the selection of possible solutions to problems and the means by which the necessary changes can be achieved.

Curriculum developers should bring desirable changes is the people who will ultimately bring changes in curriculum. It implies that society should be involved in curriculum development to ensure its commitment to changes. Several school teachers complain that curriculum is imposed from the top and school teachers who are grass root level workers are not taken in to confidence for curriculum development; Alice Miel (1946) writes in the book “changing the curriculum”. To change the curriculum of the school is to each stance this means bringing about changes in people in their desires, beliefs and students, in their knowledge and skill. Even changes in physical environment, to change extent that they can be made at all, are development upon changes in the person who have some control over that environment. In short, the nature of curriculum changes should be seen for what it really – is a type of social

change, change in people, not mere change or paper" Vesson Anderson (1996) wrote in his book " Curriculum Guideline " in an era of change that no curriculum change could be lasting without a change in people's thinking. Albert I. Oliver (1977) wrote in his "curriculum improvement". It should be stressed too strongly that curriculum improvement is a cooperative endeavor". Therefore according to him "the more individuals can identify themselves with a curriculum activity, the more readily will they accept new phases".

Hence, Curriculum is a runway for attaining goals of education; it is considered as a blueprint of an educational programme. The basis for any major curriculum change is significantly to improve the existing curriculum. The Process of Curriculum change helps in the assessment of future needs of the existing curriculum along with a determination of what needs to be changed and the selection of possible solutions to problems and the means by which the necessary changes can be achieved.

4.5 NEED FOR CURRICULUM CHANGE

Social needs and aspirations are changing. As the level of students of a group of people increases, as the economic conditions develop, the needs and aspirations also change. Growth and development are the distinguishing characteristics of human life, individual as well as collective. Individual has to grow physically economically, culturally and spiritually. Society has also to become more and more refined. We have to plan for this growth and development upward. Simultaneously, the technology is fast developing. It is an age of technology that we living. Educational technology has brought in changes in the concepts in the aids, in the strategies that we use for instructional purposes. The hardware made available to the teacher and the software that he can prepare or get from other sources, have helped him to plan more and more effective and efficient instructional designs and carry them through in the classroom. Curriculum content should be based on current information and not the past information that has been proved to be false or not useful of usable.

Now, we have more number of students, knocking at the doors of leaning houses. They are more in number and they are also mere heterogeneous. Today we have a more complex group of students, complex in composition, nature, needs and aspirations, motives and entry behavior, than that students of previous years. To provide them with equitable opportunities and experiences and activities curriculum has to be flexible and changing within a framework and also change in framework too according to the needs of the hour. Knowledge is expanding at astronomical speed. New knowledge is being discovered day by day, second by second. There is, therefore need for changing, updating, constantly the curriculum content. Education in the means of effecting this growth and education does this through the curriculum. Curriculum and its various components, the objectives, the content the instructional methods, have to be changing. A stagnant curriculum will 'strike' like a stagnant pool. If curriculum is not changing it will not serve the purpose and will hinder the growth and progress in nation. The changing society, the changing student population, the growing knowledge, the developing technology demand are changing the curriculum. Curriculum has to be renewed constantly. Provision for change, for renewal, should be build-in in the curriculum framework itself.

Objectives of Curriculum change

The following are the objectives of Curriculum Change:

- To restructure the curriculum according to the needs, interests or abilities of the learner
- To eliminate unnecessary units, teaching methods and contents
- To introduce latest and updated methods of teaching and content
- To add or delete number of teaching hours of instruction
- To correlate between the student's theory courses and learning practices.
- To accommodate innovative techniques and strategies relevant to the level of learners
- To add the components of innovations in technology in teaching-learning process
- To update the science and trends of the subject-matter

Nature of curriculum change

- It comprises a challenging selection of subjects that help children and young people understand the world.
- It highlights skills necessary for learning throughout life, as well as for work, and for one's personal development and well-being
- A school curriculum is intended to provide children and young people with the knowledge and skills required to lead successful lives
- There is growing concern that the taught curriculum needs to be reconsidered and redesigned.

Categories of Curriculum change

The following are the broad categories of curriculum change

- Introduction of a whole new degree program or specialized stream at the undergraduate level.
- Introduction of a whole new (course-work) degree program at the postgraduate level.
- Introduction of a new subject, or deletion of an existing subject.
- Change to or within a first-year or other core subject, such as a change to the first language taught to undergraduate students.
- Change to or within an elective subject, such as a change in the choice of language used in a third-year subject.

Factors Influencing Curriculum Change

The following factors have been identified as changing forces which drive or inhibit change:

- **Vision:** the vision that people have of a deduction system and what it should accomplish must change in order for the system of change.
- **An Individual:** strong leadership is the key factor for change. The characteristic of such leadership is to have the capacity to attract academic staff to rally behind principled educational objectives that are supported within the accept need for change.
- **Financial pressure:** Clearly there are powerful budgetary forces that influence changes. Class sizes are a consequence of the financial stringencies we operate under. Cost pressures can influence issues other than staff ratios.

- **Staffing Issues, including Workload:** Even if funding for staff positions is available, it is always possible to fill them. It is likely that most academics are not ready to adopt any innovative method. Moreover, many of our curriculum decisions are based open the zero-sum policy, and if new material is to be included, then soothing else must be removed.
- **Teaching and Learning Change:** teaching and learning based on the best available research on how people learn is at the core of the new system. Closely related is the perspective that all students need and can learn the higher level kills of understanding, communication, problem solving, decision making and teamwork. It changes do not occur in teaching and learning all the other changes have little value.
- **Administrative role and responsibilities:** to achieve change in the classroom, administrative roles and responsibilities need to shift at the school, district, and state levels from a hierarchical structure of control to one of support and shared decision making.
- **Employed and Industry Viewpoint:** Employer have strong opinion about the curriculum, usually requesting more emphasis on transferable skills (such as communication, social, analytical, and critical- thinking skills) in students. They are complaining that change is not happening fast enough in critical areas such as communication skills. Schools concentrate curricula on more theoretical work. The scarcity of resources in schools contributes to the slow progress in implementing changes.
- **Student Viewpoint:** Students expect a good range of elective subjects to be offered. However, on the whole, their demands appear to have a limited influence on curricula. British cross disciplinary surveys suggest that "student preferences do not tent to push the curriculum either to mire academic or to more vocational treatments" (Jenkel & Kogan, 1999) and the student choice continues to be determined primary by personal interest.

- **Student Abilities:** In an ideal world, our curricula would be dictated by our desired to create students of the highest possible caliber. Unfortunately, the weaker students sometimes do not meet extended level in term of Maths or English skills, or in breath of knowledge in other ways. Sometimes we take the path of least resistance, and design our curricula not for the excellent students but instead for the mediocre ones. Of course, many of the mediocre students go on to make great successes of their lives, and generate innovation that is valued by the community. But consideration of their needs, and application of those considerations across the gamut of student abilities, also means that we do a disservice to the truly excellent students.
- **Public and Political Support:** As the vision develops translated into practice, the support of the public and of the political leadership at all levels of the system must grow. Such support involves a deepening understanding of what and why of the changes need. The inclusion of diverse populations appears to be critical in building support.
- **Education department and government regulation:** The subjects offered in our schools have been growing for a long term, and the closing down of programmes is uncommon; there is usually considerable pressure to discontinue low-enrolment subjects. Such pressures can have impact on teaching methodologies in general. Another source of pressure is school administration's insistence on internal, national, and international benchmarking. We compete for students with international institutions, and those same students then compete for job with them.
- **Policy Alignment:** State and local policy need to be aligned around the beliefs and practices of the new system, particularly in areas related to curriculum frameworks, instructional methods and materials, student assessment practice, resource allocation and the inclusion of all types of students.
- **Networking;** Building networks that study, pilot, and support the new vision of the education system is essential in establishing lasting systemic change. These networks typically do not rely on computers,

newsletters, structure. They frequently use communications to link people of similar roles across existing organizational lines.

- **Academic Fashion;** Our curriculum should be attractive to students. Curriculum should be chosen on reputation: academically strongest, most up-to-date, greatest industry relevance, and best teaching. In practice, we all know that students also consider a great many other factors: how easy subjects are to pass, flexibility in delivery. This pressure also sometimes works the other way and an innovation that appears to be successful.

Scope of Curriculum Change

The scope of Curriculum change should be concentrated in answering the following questions:

- What determined the success of curriculum change processes?
- Were there specific factors that had a significant impact on whether or not the change process was successful?
- Did teachers have strong views on the process of curriculum change?
- Did teacher attitudes and/or backgrounds have an impact on the success or failure of curriculum change procedures?
- Did the revision procedures have an influence?
- What effect, if any, did pre-service training have on the changing process?
- Could these factors be identified and generalized to other programmes?

Process of Curriculum Change

Social scientists have stated that change probably occurs in three stages:

- **Stage I:** Initiation: in which ideas of change are launched and decisions are made regarding nature, direction and extent of change.
- **Stage II:** Legitimating: in which the sentiment on behalf of change is being communicated
- **Stage III:** Congruence: involves separate system of values held by the person or persons seeking to create change.

In organization, including school system, change occurs as a result of:

- Planning by equals
- Introduction by superior officers
- Outright coercion by the same officers

To function enduringly, change should apparently be a 'Deliberate collaborative process' involving the following features:

- A joint effort that involves mutual determination of goals
- A spirit of inquiry – reliance on date publicity share
- A voluntary relationship between change age and client
- A power distribution in which the client and change agent have equal opportunities to influence the other
- And emphasis on methodology rather than content learning

Requirement of Curriculum change

- Practicing educators, both administrators and classroom instructors, must be directly involved in successful curriculum revision processes.
- The time frame for training and revision procedures should be of short duration.
- The review process must be consistent throughout an extended period of revision.
- Participants in the revision process should have access to continuous assistance, opportunity for frequent discussion, and periodic review throughout the entire process. This will increase the essential "buy-in" noted so often as vital for effective curriculum reform.
- In-district expertise must be combined with out-of-district authorities to better accommodate demands and the expectations of the curricular revision procedures.
- Better understanding of the curriculum, curricular change, and curriculum needs are being developed. Further need exists, however, as indicated by the lack of change in classroom instruction.

Strategies for curriculum change

There should be following strategies followed in curriculum changing process:

- Changing curriculum and instruction should be a gradual process
- Curriculum change should be worked with individual teachers at first, or with small clusters of motivated individuals
- Individuals respond uniquely (at times unpredictably) to new ways of doing things, no matter how sensible or appealing the new ways might be
- It takes time — often years — to successfully implement curriculum change
- A number of organizations host websites and conferences dedicated to curriculum improvement.

Check Your Progress 1

Notes: a. Write your answers in the space given below.
b. Compare your answers with those given at the end of this unit.

1. Write any five objectives of Curriculum change
   ……
   ……
   ……
2. Enlist any five factors influencing curriculum change.
   ……
   ……
   ……
3. What are the stages of curriculum change?
   ……
   ……
   ……

4.6 CURRICULUM PLANNING

Curriculum development is the practical aspects of management of curriculum. The basic assumption of management concept is that no systems perfect. Therefore, there is the need to improve and modify the system empirically. As these perspectives change, so the curriculum will charge through the process known as curriculum development or curriculum reform. Education and societal change are closely related. The process of curriculum

development involves movement and change as knowledge changes and as the academy changes to meet the needs of an increasingly complex society. Carl (1995) defines curriculum development as "…and umbrella and continuous process in which structure and systematic planning methods figure strongly from design to evaluation". Curriculum development can be defined as the systematic planning of what taught and learned in schools as reflected in courses of study and school programmes. It is central to the teaching and learning process, and includes all the planning and guiding of learning by teaching, whether it is carried out in groups or individually inside or outside a classroom. This description takes into account several important principles and some of the important are:

- Curriculum development is a flexible, dynamic process leading to products such as new or revised curriculum frameworks or detailed curricula which include objectives or learning outcomes, content and means of assessment and evaluation of learning. It can also involve methods and materials- It is not a list of content.
- Curriculum development is about planning and guiding – it is not a blueprint

  Curriculum development can include anyone and occur anywhere – it is not exclusive.

Unfortunately, many people involved in education and training do not view curriculum development this way. They often see it as simply the compilation of a list of contend meant to be taught by teachers. As the above principles show, however, development is a complex process which integrates different approaches, concepts, methods and activities. It is vital that attention be paid not only to the quality of outputs, such as those mentioned above, but also to the quality of both, products and process. On the other hand, The phrase "curriculum planning" can mean one of two related things: either the process of an individual teacher to build a class curriculum, or the means through which school boards coordinate the various curricula being used by teachers in order to achieve uniform goals.

Need of Curriculum Planning

The needs of the curriculum planning are stated as:

- A curriculum plan is one of the best way for teachers to look objectively
- Organize an effective way to get from beginning to end
- Schools use curriculum plan to set overarching goals
- Curriculum plans are an easy way for teachers and schools to quickly monitor progress
- It is easy to notice when students are falling behind, or when objectives are being missed.
- Planning is also an important way for schools to streamline student assessment
- Teachers are often required to incorporate certain assessment into their curriculum planning

Curriculum planning develop well-coordinated, quality teaching, learning and assessment programs, which build students' knowledge, skills and behaviours in the disciplines, as well as their interdisciplinary and/or physical, personal and social capacities. Curriculum planning ensures the following Components:

- a shared vision
- shared understandings and a common language in the school community
- optimum coverage of all domains within the curriculum
- continuity of learning between domains across year levels
- the full range of learning needs of students are addressed
- students are given opportunities to develop deep understanding
- cohesiveness in teaching, learning and assessment practices
- elimination of repetition of learning activities without depth or breadth across levels

Process of Curriculum Development

Curriculum development is understood as process implying a wide range of education concerning learning experiences, taken by different factors at different levels, politicians, experts and teachers: at the national, state, local, school and also international levels. In some cases, the curriculum

development process proceeds from the top downwards. The most usual term to indicate this type of process is the English expression “top-down”. In this case curriculum development processes can be defined through four phases:

- Curriculum presented to teachers
- The curriculum adopted by teachers
- The curriculum assimilated by learners and
- The evaluated curriculum

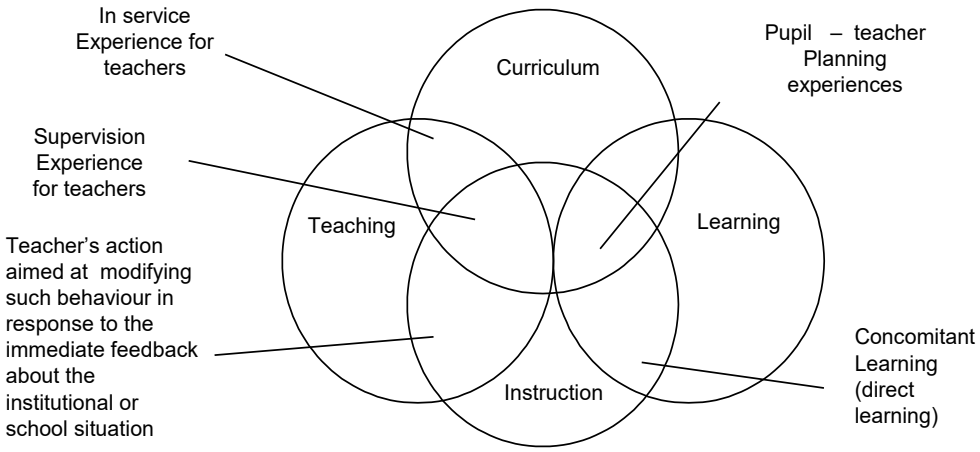
The majority of centralized countries follow this type of curriculum development process. In some other cases, the curriculum development process proceeds from the bottom upwards (a bottom-up process). In this case as well, four different phases can be identified:

- What the society or the parents want;
- Responses provided by teachers in the schools;
- Collection of these responses and the effort to identify some common aspects;
- The development of common standard and evaluation;

Curriculum Interaction with Four Systems

MacDonald defines curriculum as the social system that actually produces a plan for instruction. Instruction is a social system within which formal teaching and learning take place. Teaching is a personality system – the teacher acting in a particularly manner to facilitate learning. Learning is defined as personality system-the student becomes involved in specialized task related behaviours.

The Interaction of Four Systems



The majority of decentralized countries follow the type of curriculum development process or processes, which are carried out in each school in the context of its community, but without necessarily taking into consideration the developments adopted by other schools or institutions. Participants of curriculum planning get involved in variety of activities such as:

- Discussing common problems
- Making decisions
- Developing a functional philosophy
- Studying learners and the environment
- Keeping up-to-date with the knowledge
- Studying ways to improve instructions
- Carrying research and evaluation

Approaches to Curriculum Planning

There are many approaches to curriculum development. They differ by the various perspectives curriculum developers construct regarding the key curricular elements: curriculum, teachers, students and the context. Some curriculum developers focus on students and their learning goals where others focus on the effect of the teacher's action upon learning. Still others focus on the context of learning and the degree to which individuals are viewed. The following are the approaches in curriculum planning and development:

- Procedural: what steps should one follow?
- Descriptive: what do curriculum planners actually do?
- Conceptual: what are the elements of curriculum planning and how do they relate to one another
- Critical: whose interests are brought served?

Steps in Curriculum Planning

Planning of Curriculum possessing the following steps:

i. Identify Issue/Problem/Need

Identify Issue/Problem/Need The need for curriculum development concern about a major issue or problem of one or more target audience. This section explores some of the questions that need to be addressed to define the issue and to develop a statement that will guide the selection of the members of a

curriculum development team. The issue statement also serves to broadly identify, the scope (what will be included) of the curriculum content

ii. Form Curriculum Development Team

Once the nature and scope of the issue has been broadly defined, the members of the curriculum development team can be selected. Topics covered in this section include,

- roles and functions of team members,
- process for selecting members of the curriculum development team, and
- Principles of collaboration and teamwork.

The goal is to obtain expertise for the areas included in the scope of the curriculum content among the team members and develop an effective team

iii. Conduct Needs Assessment and Analysis

There are two phases in the needs assessment process. The first is procedures for conducting a needs assessment. A number of techniques are aimed toward learning what is needed and by whom relative to the identified issue. Techniques covered in this section include: KAP - Knowledge, Attitude, and Practice Survey; focus groups; and environmental scanning. Analysis, the second part of this needs assessment step, describes techniques on how to use the data and the results of the information gathered. Included are: ways to identify gaps between knowledge and practice; trends emerging from the data; a process to prioritize needs; and identification of the characteristics of the target audience.

Check Your Progress 2

Notes: a. Write your answers in the space given below.
b. Compare your answers with those given at the end of this unit.

1. List the needs of curriculum planning.
   ……
   ……
   ……
2. What are the phases of curriculum development processes?
   ……
   ……
   ……
3. What are the major steps involved in curriculum planning?
   ……
   ……
   ……

4.7 AGENCIES OF CURRICULUM CHANGE

There are different types of agencies that play major roles in curriculum influence system: official, quasi-official, and unofficial. The official agencies have binding legal authority over curriculum decisions. Basically, while the centre is responsible for providing general direction in terms of educational policy and curriculum, education is predominantly a state subject, and the running of this vast school network is the responsibility of individual state governments. This is done in two ways: either by directly running schools or by supporting privately runs school through grants.

A very small number of schools in each state are completely independent of government funding, and only these can really be called private schools. The management of these schools is a vast and varied patchwork of agencies both government and non-government. The involvement of non-government agencies will prove of critical importance in evolving curricula and pedagogy suitable for local needs and demands, while keeping in mind the important issue of equity in educational opportunities. The old established state institutions for educational research have repeatedly shown themselves incapable of genuine innovation, being by and large content with periodically bringing out further batches of 'old wine in new bottles'.

The community based organizations and people's movements are not for the most part, equipped with the technical expertise and the broader national and international perspective needed to develop appropriate curricula and pedagogy for local needs within the larger mainstream. Specialist technical support organization, along with colleges and departments of education and social work in universities, has a crucial role to play in this area. This is also the area where non-government organization can play a useful and appropriate role. This would create a space for them to work positively and dynamically in the field of education and at the same time ensure that the structural adjustments, globalization, privatization or whatever new jargon emerges to explain away that abdication.

University Grants Commission (UGC)

University Grants Commission constituted a committee in 1986 to examine the existing curriculum. The committee will examine the existing curriculum in the respective subject of different universities in the country in terms of

quality as well as workload. The committee examined how the new curriculum could promote human resource development and identified are which are crucial to make education meaningful in the task of national development.

- The committee devised a model curriculum which would be relevant to the requirement of the country.
- The committee suggested the textual materials which would be required to follow the new curriculum.
- The committee suggested ways and means for preparing textbooks, teaching aids, and library as well as laboratory equipments in implementing the proposed curriculum.
- It also indicated how the teachers are to be trained in order to impart education according to the revised curriculum.

Recommendations of the committee are as follows:

For Implementing the Curriculum: the curriculum prepared by the curriculum development centre to be discussed and modification made before it is accepted and implemented. To enable focused discussion in the curriculum the following suggestions are made.

- A national meeting on UGC officials, the curriculum committee members and twenty invited teacher educators from all over the country to discuss the curriculum.
- Regional seminars, organized by UGC in collaboration with six departments of education at which teacher educators, administrators, research workers and other professional in the field of teacher education including those from under graduate programmes to discuss and react the curriculum.
- State level seminars organized by the UGC and the university department of education at which concerned teaching faculty of master's course in education discuss and give the reaction to the curriculum.
- A national survey to be conducted on existing conditions in teaching departments.
- Arrangement of national level lectures on the curriculum to the place the curriculum in a wider perspective.

- Publication of articles in the media by eminent educationists, on the existing conditions are insisting the need for change and presenting the possibilities of new curriculum.
- Specific literature to be prepared and seminars to be organized on the modalities for use of modules in teaching.

Development of Materials to Support the Curriculum: Creative workshops to be organized for preparation of materials to support curriculum such as basic books, technology software, reading lists etc,

Agencies and Bodies for the implementation of the Curriculum: A National Curriculum Development Centre to be established by the UGC.

- Six Regional Curriculum Development Centers need to be indentified
- Ten teachers training Institutions are to be established
- Curriculum development cells to be established
- A statutory body for National Curriculum Development in Higher Education is to be constituted

Development of Curriculum as an Area of Inquiry

- Capabilities of Departments of Education need to be strengthened to contribute to curriculum studies
- Publication of Journal of curriculum Studies and Curriculum Bulletin with widespread circulation through a net work of state, regional and national agencies
- Research scholars are to be allotted especially for research in curriculum at the doctoral and post doctoral levels. Research associates and research assistants for curriculum research to be appointed in all university departments of education.
- Curriculum research to be included in the research agenda of national agencies.
- Experts in curriculum studies form Foreign Universities be invited as visiting professors in department of education.

Action required by UGC Recommendation

For finalizing the curriculum,

- Section to be given to curriculum development centre in the department of education to complete the work with the necessary change in functioning and with require financial assistance.
- Convene a) National Meeting to discuss the curriculum b) Regional seminar participating six departments of education to discuss and react to the curriculum c) State level seminar inviting teaching faculty of master's course in education to discuss and give suggestions to the curriculum.

UGC Expected outcomes of Curriculum implementation

- Identify and establish relevant plan of action
- A national Curriculum Development centre
- Six Regional curriculum development centre
- Ten teachers training Institutions
- Curriculum implementation cells
- Curriculum material units
- Department of Curriculum Studies
- Strengthen existing departments of education through ad hoc specific grants and services of experts in the area of curriculum development.
- Constitute a statutory body for curriculum development in education
- Organize creative workshops for preparation of materials support curriculum

National Council of Educational Research and Training (NCERT)

In the Indian situation for the planning of secondary level curriculum the agency involved at the central level is National Council of Educational Research and Training. It frames the curriculum and circulates it for adoption to state department of Education, boards or examination etc. it frames the curriculum in consultation with experts subjects teachers and heads of institutions. Its task is to frame the curriculum in keeping with the National policy on education. The curriculum framework prepared by it is only suggestive and it is for the state governments and boards' of examination to accept it modify it or reject it.

The Major Role of NCERT

- To monitor the administration of NIE / Regional colleges of Education.
- To undertake aid, promote and co-ordinate research in all branches of education for improving school – education
- To organize pre-service and in-service education programmes for teachers.
- To prepare and publish study material for students and related teacher's handbooks.
- To search talented students for the award of scholarship in science, technology and social sciences.
- To undertake functions assigned by the Ministry of education (Now HRD) for improving school –education.
- To promote, organize and foster research in all fields of education.
- To disseminate knowledge of improved educational techniques and practices; and
- To conduct special studies, surveys and investigations.

Functions of NCERT

The functions of the NCERT broadly relate to

- Research and development
- In-service and pre-service training
- Extension and dissemination work –all these lauded to achieve the main objective of improving the quality of education.

The NCERT, therefore (i) develop curriculum, instructional and exemplar materials, methods of teaching, techniques of evaluation, teaching aids, kits equipments, learning resources etc. (ii) Organize pre-service and in-service training of teachers, teacher educators and other educational personnel; (iii) conducts and promotes educational research; (iv) disseminates improved educational techniques and practices and research findings, and (v) acts as a cleaning house for ideas and information on all matters relating to school education and teacher education.

State Council of Educational Research and Training (SCERT)

All kinds of academic programmes are coordinated, streamlined and maintained by the SCERT. Periodical revisions and upgrading of curricula, preparation of text books, teachers' guidance and other teaching and learning materials and improvement in methods of teaching and evaluation are also undertaken by the SCERT.

Functions of SCERT

The State Council of Educational Research and Training discharges the following functions:

- To organize and implement the special educational projects sponsored by UNICEF, NCERT and other agencies for qualitative improvement of school education and teacher educators.
- To prescribe curricula and textbooks for the school and teacher training institutions.
- To produce instructional materials for the use of teacher- educators.
- To arrange in-service training for different categories of teachers, inspecting officers and teacher-educators and coordinate the work of other agencies operating at the state level.
- To organize programmes including Correspondence-cum- Contact Courses for professional development of teachers, teacher-educators and inspecting officers.
- To supervise the working of the Teacher-Training Colleges, Secondary Training Schools and Elementary Training Schools.
- To provide extension service to Teacher-Training Institutions at all levels in the state.
- To conduct studies and investigations on the various problems of education.
- To evaluate the adult and non-formal education programmes entrusted by the Government.
- To conduct the public examinations especially at terminal stages like the end of Class HI and Class IV etc. with a view to selecting candidates for scholarships through such examinations.

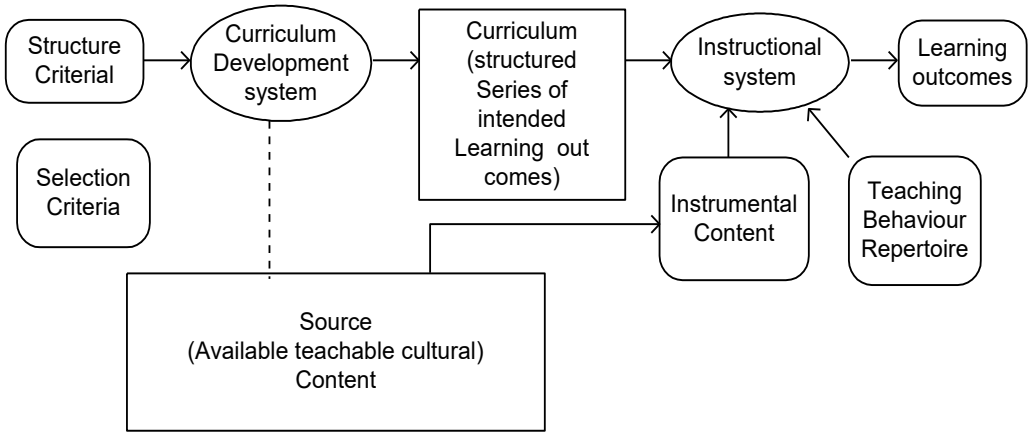
4.8 CONCEPT OF CURRICULUM TRANSACTION

Curriculum Transaction is the effective and desired implementation of the curriculum contents on the basis of aims and objectives listed in the curriculum. Curriculum Transaction incorporates effective planning for providing learning experiences for its learners, organization of planning, administration/implementation of the organized planning and evaluation of the implementations by the implementer and the experts in the relevant field. On the other hand, transaction or Curriculum management is the process of planning and organizing the curriculum in a particular subject area for different levels of education and continuously monitors it while being implemented.

Robert E. Stake notes that transactions occur between and among students and teachers, among students and students and among students and resource persons. Transactions are interactions the students have with certain curriculum materials and classroom environments dealing with time allocation, space arrangements and communication flow. Miller describes curriculum in the context of higher education as "the broad inter-related decisions about what is taught that characterizes the general framework within which teaching is planned and learning is taking place".

Curriculum as Output of One System

Johnson defines curriculum as structured series of intended learning outcomes. He defines curriculum plan as an output of the process of curriculum development.



Requirements for Curriculum Transaction

The following are some of the requirements of effective curriculum transaction;

- Planning in execution of framed objectives
- Clarity of thought to be presented
- Sound knowledge to transact to the target
- Review of the work in prior
- Team responsibility
- Clarity of communication
- Addressing different levels of children
- Knowing, observing and understanding children at all times
- Time management
- Alertness in preparation and presentation
- Material organization relevant to the level of pupils
- Facilitate learning Environment
- Selection of appropriate teaching style and method
- Ready alternatives if needed

In the transaction part, teachers' role is important to initiate the process effective so as to attain the goal in a framed path of objectives. Hence, teachers are in need in training in ways to present learning in a wider variety, incorporating cooperative learning, music, role play, project- and problem-based activities inside and outside the classroom in a natural way.

New Approaches to Curriculum Transaction

i. Critical Pedagogy

Critical pedagogy is a philosophy of education and social movement that combines education with critical theory. First described by Paulo Freire, it has since been developed by Henry Giroux and others as a praxis-oriented 'educational movement, guided by passion and principle, to help students develop consciousness of freedom, recognize authoritarian tendencies, and connect knowledge to power and the ability to take constructive action'. Critical pedagogue, In Short defines critical pedagogy as: "Habits of thought, reading, writing, and speaking which go beneath surface meaning, first impressions, dominant myths, official pronouncements, traditional clichés,

received wisdom, and mere opinions, to understand the deep meaning, root causes, social context, ideology, and personal consequences of any action, event, object, process, organization, experience, text, subject matter, policy, mass media, or discourse". Critical pedagogy includes relationships between teaching and learning. Its proponents claim that it is a continuous process of what they call 'unlearning', 'learning', and 'relearning', 'reflection', 'evaluation', and the impact that these actions have on the students, in particular students whom they believe have been historically and continue to be disenfranchised by what they call 'traditional schooling'.

ii. Problem - Based Learning

Problem-based learning (PBL) is a student-centered pedagogy in which students learn about a subject through the experience of problem solving. Students learn both thinking strategies and domain knowledge. The PBL format originated from the medical school of thought, and is now used in other schools of thought too. It was developed at McMaster University School of Medicine in Canada in the 1960s and has since spread around the world. The goals of PBL are to help the students develop flexible knowledge, effective problem solving skills, self-directed learning, effective collaboration skills and intrinsic motivation. Problem-based learning is a style of active learning.

iii. Reflective Learning

There are various definitions of 'reflective learning' and much has been written on the subject. Nevertheless, it is generally understood that reflection as it applies to learning is a skill that can be summarized as:

- the ability to look back over an experience and break it down into its significant aspects, such as any factors affecting success or failure
- a means of learning by making links between theory and practice (or learning and action)
- a means of improving performance, by using the outcome of reflection to inform future practice
- a way of recognizing, and maximizing the personal value of, a learning experience
- a way of turning surface learning into deep learning

iv. Experiential Learning

Experiential learning is learning through reflection on doing, which is often contrasted with didactic learning. Experiential learning is related to, but not synonymous with, experiential education, action learning, adventure learning, learning, cooperative, and service learning. While there are relationships and connections between all these theories of education, importantly they are also separate terms with separate meanings. Experiential learning focuses on the learning process for the individual. It is often used synonymously with the phrase 'experiential education', however, while experiential learning considers the individual learning process, experiential education should be considered a broader philosophy of education. As such, it is concerned with issues such as the relationship of teacher and student, as well as broader issues of educational structure and objectives.

Check Your Progress 3

Notes: a. Write your answer in the space given below.
b. Compare your answers with those given at the end of this unit.

1. Write any four requirements for Curriculum Transaction.

……
……
……

2. What are the new approaches to curriculum Transaction?

……
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4.9 ROLE OF MEDIA IN CURRICULUM DEVELOPMENT AND IMPLEMENTATION

The role of technology finds its place at the onset of curriculum implementation namely at the age of instructional planning. In a teaching-learning situation, there is the critical need to provide the learners information that forms a coherent whole. Otherwise, learning may end up haphazard and in the end ineffective. A systematic approach to instructional planning is, therefore, necessary. And in instructional planning, each lesson should have a

clear idea of general specific goals, instructional objectives, content, activities, media, materials, assessment and evaluation on how objectives have been achieved. In the choice of instructional media, technology comes into play.

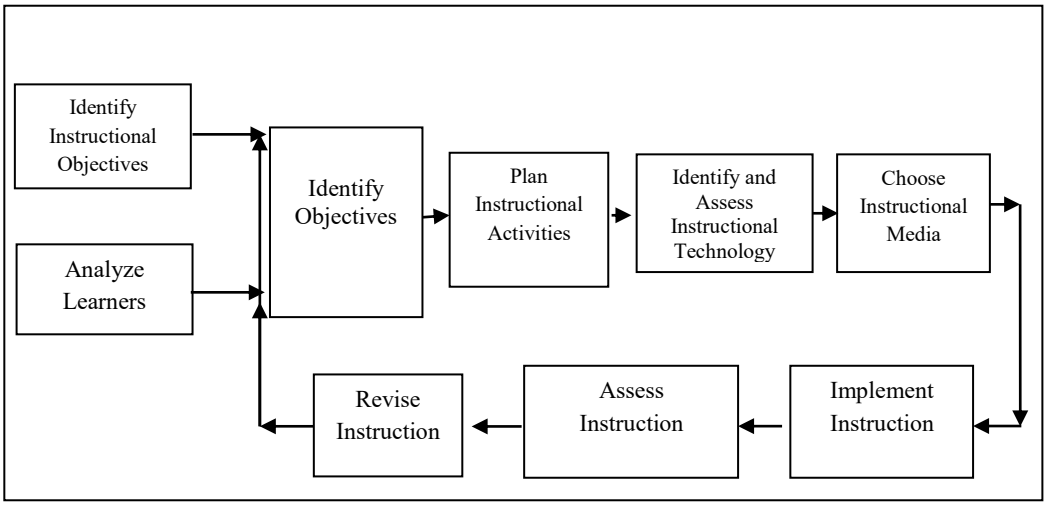

Figure: 4.1 Systematic Planning Process

Hence, Instructional media may also be referred to as media technology or learning technology, or simply technology. Technology plays a crucial role in delivering instruction to learners. Technology offers various tools of learning and these range from non-projected media from which the teacher can choose, depending on what he sees fit with the intended instructional setting In the process, what ensues is objective-matching where the teacher decides on what media or technology to use to help achieve the set learning objectives.

Media for Curriculum Implementation

i. Non-Projected Media

- Real objects
- Models
- Field trips
- Kits
- Printed materials (books, worksheets)
- Visuals (drawings, photographs, graphs, charts, posters)
- Visual boards (chalkboard, whiteboard,
- Flannel Board. etc.)
- Audio materials

ii. Projected media

- Overhead transparencies
- Opaque projection
- Slides
- Filmstrips
- Films
- Video, VCD, DVD
- Computer / multimedia
- Presentations

Factors for Technology Selection

In deciding on which technology to use from a wide range of media available, the factors on which to base selection are:

- **Practicability** – It is the equipment (hardware) or already prepared lesson material (software) available? If not, what would be the cost in acquiring the equipment or producing the lesson in audio or visual form?
- **Appropriateness in relation to the learners** – Is the medium suitable to the learner's ability to comprehend? Will the medium be a source of plain amusement or entertainment?
- **Activity/suitability** - Will the chosen media fit the set of instructional event, resulting in information, motivation, or psychomotor display?
- **Objective-matching** – Overall, does the medium help in achieving the learning objective(s)?

The Role of Technology in Curriculum Delivery

It can easily be observed that technological innovation in the multifarious fields of commerce, science and education, is fast developing such that it is difficult to foresee the technological revolution in the millennium, inclusive of educational changes. For certain, however, technological changes in education will make its impact on the delivery of more effective, efficient and humanizing teaching-and-learning. But presently, we can identify three current trends that could carry on to the nature of education in the future. The first trend is the paradigm shift from teacher-centered to student-centered approach learning. The second is the

broadening realization that education is not simply a delivery of facts and information, but an educative process of cultivating the cognitive, affective, psychomotor, and much more the contemplative intelligence of the learners of a new age. But the third and possibly the more explosive trend is the increase in the use of new information and communication technology or ICT. Already at the turn of the past century, ICT in its various forms and manifestation has made its increasing influence on education, and it is expected that the trend will speed up even more rapidly. Propelling this brisk development is the spread of the use of the computer, and the availability of desktop micro-computers affordable not only to cottage industries, businesses, and homes but also to school.

For now, the primary roles of educational technology in delivering the school curriculum's instructional programme have been identified:

- Upgrading the quality of teaching-and-learning in schools incorporating available technologies.
- Increasing the capability of the teacher to effectively inculcate learning, and for students to gain mastery of lessons and courses
- Broadening the delivery of education outside schools through non-traditional approaches to formal and informal learning, such as Open Universities and lifelong learning to adult learners.
- Revolutionizing the use of technology to boost educational paradigm shifts that give importance to student-centered and holistic learning.

4.10 NATIONAL CURRICULUM FRAMEWORK (NCF) GUIDELINES FOR CURRICULUM TRANSACTION

The NCF (2005) aims to guide the development and transaction of curriculum in schools and to address the problems of transmission of information and rote learning. It includes guidelines for curriculum transaction to make learning active, social and meaningful. Schools are supposed to adopt these guidelines and the current five-year plan of the Indian government reiterates this. The guidelines are as follows:

- Connecting knowledge to life outside the school
- Ensuring that learning shifts away from rote methods

- Enriching the curriculum so that it goes beyond textbooks
- Making examinations more flexible and integrating them with classroom life
- Nurturing an overriding identity informed by caring concerns within the democratic policy of the country.

The first guideline aims to contextualize learning and ensure that the content gets a broader perspective as it is linked to the life of the learners during the instructional process. The second guideline intends that learners are enabled to link new and old learning so that they develop conceptual clarity and are encouraged to think critically and apply learning. The third guideline aims to address the problem of considering textbooks as the sole and final source of knowledge. It is in fact an extension of the first guideline and requires that learners be introduced to various sources of knowledge. This will introduce learners to various views, sometimes even contradictory ones and help them to build a perspective that may accommodate diverse opinions. The fourth guideline seeks to make assessment a formative process so that teaching and assessment determine each other and the meaningfulness of learning can be ascertained on a continuous basis. The language of the fifth guideline is complex and so is its intention. It underscores the need to raise awareness, nurture a sense of identity and the ability for critical thinking on socio-political realities. It also intends that learners are helped in internalizing India's constitutional values of equality, justice, liberty and fraternity so that democracy does not remain only as a form of governance but becomes a way of life for them. Thus, while making learning an active process to be carried out through group activities, it seeks to impart training in citizenship for India, a democratic polity. For implementing these guidelines the NCF suggests pedagogies involving activities of various kinds like reading, discussion, sharing experiences, and creating things and so on, to be carried out collaboratively. In Indian schools understanding has been bartered away for memory-based short-term information accumulation for examination, using information laden textbooks (NCF, 2005). The learning outcomes are also low. Therefore, the quality of school education is a cause of concern. However, the learning outcomes of open schools are overlooked and the use of

information packaged as SLM for summative assessment is also accepted. Moreover those educated by open schools also become a part of the workforce and many may aspire to higher education. One of the mission statements of NIOS also says that efforts for ensuring equity in education do not end with providing access but also include deliberate measures worked out to ensure quality of education. To improve instructional processes, schools are supposed to implement the NCF that includes guidelines for curriculum transaction.

Check Your Progress 4

Notes: a. Write your answers in the space given below.
b. Compare your answers with those given at the end of this unit.

1. What are the major functions of NCERT?
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   ……
   ……
2. Write any five functions of SCERT.
   .....
   .....
   .....
3. How the types of media classified teaching-learning process?
   ……
   ……
   ……
4. What are the roles of educational technology in delivery school curriculum?
   ……
   ……
   ……
5. What are the major guidelines given by National Curriculum Framework?
   ……
   ……
   ……

4.11 LET US SUM UP

Curriculum development is the most comprehensive term which includes planning, implementation and evaluation of curriculum. Bean Toepfer & Alessi (1986) define curriculum in their book "curriculum Planning and Development". Curriculum development mainly concern with design of plans for actual teaching-learning situations. It is based upon the broad goals and identifies ways to translate those goals into a coordinated and coherent

programme of learning experience. The area of curriculum is one of controversy, concern, and conflict. Without doubt, however, educational curriculum is one of society's foundational components. Realization of a sustainable education paradigm requires vision, image, design, and action from all concerned with achieving healthy, ecologically sustainable societies. Time is critically short to make the educational changes necessary to ensure a secure future. It is important to change curriculum based on need of the individual and society periodically. Also, it can be attained through appropriate transacting strategy in different levels. Technology and media are the unavoidable components in development and as well as execution part of curriculum. Hence, appropriate stress should be taken to use all available and applicable technologies and media for its effective transaction provided with the guideline given by different agencies so as to meet the challenge of education in present need of the society.

4.12 UNIT END ACTIVITIES

1. Discuss your views on media integration in education system.
2. Compare the views of SCERT and NCERT roles on Curriculum Implementation.

4.13 POINTS FOR DISCUSSION

1. Explain the need and importance of Curriculum Change.
2. Discuss the approaches in curriculum planning.
3. Explain the concept of curriculum transaction.
4. Explain the role of UGC in curriculum implementation and its recommendations.

4.14 ANSWERS TO CHECK YOUR PROGRESS

Check Your Progress 1

1. The following are the objectives of Curriculum Change:

- To restructure the curriculum according to the needs, interests or abilities of the learner.
- To introduce latest and update methods of teaching and content, new knowledge and practices.

- To correlate between the student's theory courses and learning practices.
- To accommodate innovative techniques and strategies relevant to the level of learners
- To update the science and trends of the subject-matter

2. The following are the factors influencing curriculum change:
   - Vision
   - Teaching and Learning Change
   - Student Viewpoint
   - Education department and government regulation
   - Policy Alignment
3. The following are the stages of Curriculum change:
   - Initiation
   - Legitimating
   - Congruence

Check Your Progress 2

1. The following are the need of curriculum planning:
   - A curriculum plan is one of the best ways for teachers to look objectively
   - Organize an effective way to get from beginning to end
   - Schools use curriculum plans to set overarching goals
   - Curriculum plans are an easy way for teachers and schools to quickly monitor progress of all the activities
   - Planning is also an important way for schools to streamline student assessment
2. The phases of curriculum development processes are:
   - Curriculum presented to teachers
   - The curriculum adopted by teachers
   - The curriculum assimilated by learners and
   - The evaluated curriculum
3. The major steps involved in curriculum planning are:
   i. Identify Issue/Problem/Need
   ii. Form Curriculum Development Team
   iii. Conduct Needs Assessment and Analysis

Check Your Progress 3

1. The following are requirement of Curriculum Transaction:
    - Planning in execution of framed objectives
    - Sound knowledge to transact to the target
    - Review of the work in prior
    - Clarity of communication
    - Time management
2. The following are the new approaches to curriculum Transaction:
    - Critical Pedagogy
    - Problem - Based Learning
    - Reflective Learning
    - Experiential Learning

Check Your Progress 4

1. The functions of the NCERT broadly relate to:
    - Research and development
    - In –service and pre-service training
    - Extension and dissemination work –all these lauded to achieve the main objective of improving the quality of education
2. The following are the functions of SCERT:
    - To prescribe curricula and textbooks for the school and teacher training institutions.
    - To arrange in-service training for different categories of teachers, inspecting officers and teacher-educators and coordinate the work of other agencies operating at the state level.
    - To provide extension service to Teacher-Training Institutions at all levels in the state.
    - To conduct studies and investigations on the various problems of education.
    - To evaluate the adult and non-formal education programmes entrusted by the Government
3. The types of media broadly classified as:
        i. Projected Media and
        ii. Non-projected media

4. The roles of educational technology in delivery school curriculum are noted as:

- Upgrading the quality of teaching-and-learning in schools incorporating available technologies.
- Increasing the capability of the teacher to effectively inculcate learning, and for students to gain mastery of lessons and courses
- Broadening the delivery of education outside schools through non-traditional approaches to formal and informal learning, such as Open Universities and lifelong learning to adult learners.
- Revolutionizing the use of technology to boost educational paradigm shifts that give importance to student-centered and holistic learning.

5. The major guidelines given by National Curriculum Framework are:

- Connecting knowledge to life outside the school
- Ensuring that learning shifts away from rote methods
- Enriching the curriculum so that it goes beyond textbooks
- Making examinations more flexible and integrating them with classroom life
- Nurturing an overriding identity informed by caring concerns within the democratic policy of the country.

UNIT – V CURRICULUM APPROACH METHODS AND MODELS

Structure

5.1 INTRODUCTION

Designing a curriculum involves the interaction of several participants, reaching beyond the academic wall to impact the entire community. Without an effective curriculum, students would not be able to understand or meet the challenges of society. A curriculum prepares an individual with the knowledge to be successful, confident and responsible citizens. In framing such curriculum, there are various approaches to reach its objectives and output. The effectiveness of curriculum development can be realized based on the achievement of learners in an expected direction as stated before. The achievement of learners depends on many elements and factors. Out of them, teachers with their effective teaching principles associated with the required

factors and elements in teaching-learning process or models of teaching. In this techno-pedagogical need, the role of media is an unavoidable factor in transacting curricular activities. Hence, it is found that the aim of education can be achieved by means of constructing productive and needy curriculum, the selection of appropriate media in transacting curriculum with different approaches, the applicability of suitable teaching models provided the age and interests of the learners. In this unit, we will discuss about the different approaches of curriculum, principles of teaching, the role of media in curriculum and different models of teaching.

5.2 OBJECTIVES

After going through this unit, you will be able to:

- Acquire the knowledge of curriculum approach
- Under the methods of curriculum approach
- Explain the different modes in curriculum approach
- Understand the role of media in curriculum approach
- Acquaint and Analyze different models of teaching

5.3 CURRICULUM APPROACH

Curriculum Approach is the way of dealing with a curriculum, a way of doing/creating/designing/thinking about a curriculum. There are various curriculum approaches facilitate differentiation by widening the options available for students to learn and be assessed. With a variety of approaches, students react with creativity, enthusiasm, and greater knowledge retention.The following are some of the approaches of curriculum in planning, implementing and evaluating the curriculum;

i. Behavioral Approach

Behavioral approach to curriculum is usually based on a blueprint. In the blueprint, goals and objectives are specified, contents and activities are also arranged to match with the learning objectives. In education, behavioral approach begins with educational plans that start with the setting goals or objectives. The change in behavior indicates the measure of the accomplishments.

ii. Managerial Approach

In this approach, principal is the curriculum leader and at the same time instructional leader who is supposed to be the general manager. The general manager sets the policies and priorities, establishes the direction of change and innovation, planning and organizing curriculum and instruction. Curriculum managers look at curriculum changes and innovations as they administer the resources and restructure the schools. Some of the roles of the Curriculum Supervisors are:

- Help develop the school's education goals
- Plan curriculum with students, parents, teachers and other stakeholders
- Design programs of study by grade levels
- Plan classes or school calendar
- Prepare curriculum guides/ teacher guides by grade level or subject area
- Help in the evaluation and selection of textbooks
- Observe teachers' activities and their functioning
- Assist teachers in the implementation of the curriculum
- Encourage curriculum innovation and change
- Develop standards for curriculum and instructional evaluation

iii. System Approach

The organizational chart of the school represents a system approach. It shows the line staff relationships of personnel and how decisions are made. This systems approach gives equal importance to the following:

- Administration
- Counseling
- Curriculum
- Instruction And
- Evaluation

iv. Humanistic Approach

The humanistic approach considers the formal or planned curriculum and the informal or hidden curriculum. This approach is rooted in the progressive philosophy and child-centered movement. It considers the whole child and believes that in curriculum the total development of the individual is the prime

consideration. The learner is at the center of the curriculum; anything in the schools can be evaluated in term of its contribution to the students overall learning and its cost. Evaluation helps to gather data to support a decision to accept, change, or eliminate something. It serves to identify strengths and weakness of curriculum before implementation and the effectiveness of its delivery after implementation. Each Approach expresses a perspective about Curriculum Development which Impacts on:

- The design of the curriculum
- The role of schools
- Administrators
- Teachers
- learners
- Curriculum Specialist
- Requirements for Evaluation and implementation

5.4 MAXIMS / PRINCIPLE OF TEACHING

In order to achieve the different aims and objectives, certain 'Educational principles' also known as `teaching-principles' are laid down. These teaching-principles are nothing but `maxims of teaching.' Teaching is an art and to acquire efficiency in this art, teacher needs two things.

- Complete knowledge of subject matter
- Scientific knowledge of teaching styles for discriminating the knowledge to the pupils

Every teacher wants to make maximum involvement and participation of the learners in the learning process. He sets the classroom in such a way so that it becomes attractive for them. He uses different methods, rules, principles etc in order to make his lesson effective and purposeful. He uses general rule or formula and applies it to particular example in order to make teaching-learning process easy and up to the understandable level of students.

Maxims of Teaching

Maxims of Teaching are the universally facts found out by the teacher on the basis of experience. They are of universal significance and are trustworthy. The knowledge of different maxims helps the teacher to proceed

systematically. It also helps to find out his way of teaching, especially at the early stages of teaching. The different maxims of teaching are briefly explained below:

i. From Known to Unknown

When a child enters into school, he possesses some knowledge and it is the duty of teacher to enlarge his previous knowledge. Whatever he possesses should be linked with the new knowledge. If we link new knowledge with the old knowledge our teaching becomes clearer and more definite. This maxim facilitates the learning process and economies the efforts of the teacher and the taught. This way of teaching helps the learners to understand things fully. This way the teaching becomes definite, clearer and more fruitful.

ii. From Simple to Complex

The main objective of teaching is to teacher and the learners' objective is to learn something. In this process of teaching and learning, simple or easy things should be first presented to the students and gradually he should proceed towards complex or difficult things. The presentation of simple material makes the learners interested, confident and feels encouraged. As they will show interest towards the simple material, they become receptive to the complex matter. On the other hand, if complex matter is presented first, the learner becomes upset, feels bored and finds himself in a challenging situation. Simplicity or complexity of the subject matter should be determined according to the view point of the learners. It makes learning convenient and interesting for the students.

iii. From Concrete to Abstract

As **Froebel** said, "Our lessons ought to start in the concrete and end in the abstract". For example when we teach the solar system, we first visualize the sun through our senses and gives the concept of eight planets, galaxies, meteorites etc. Through this process, the learners understand the materials more easily. Some power of imagination also develops in them .But if we reverse the situation, it will become difficult for learners to understand anything. Concrete things are solid things and they can be visualized but abstract things are only imaginative things. The child understands more easily when taught through their senses and never forget that material. On the other hand if abstract things or ideas are presented, they forget it soon.

iv. From Analysis to Synthesis

When we divide a thing into easy parts or separate elements in order to understand it easily is called analysis. It is the process which helps in understanding the hidden elements of a thing or the cause of some incident or behavior. For instance, in order to tell about the structure or functions of heart, the parts of the heart are shown separately and knowledge of every part is given. After it the students are made to understand the structure or system of working of the heart. In this way, even a very difficult thing can be easily understood. Synthesis is just opposite of analysis. All parts are shown as a whole. The process of analysis is easier than synthesis for understanding a thing. This process develops the analytical power of the students. It is the best method of starting the teaching process.

v. From Particular to General

General facts, principles and ideas are difficult to understand and hence the teacher should always first present particular things and then lead to general things. A teacher should always proceed from particular to general statements. Suppose the teacher is teaching continuous tense while teaching English, he should first of all give few examples and then on the basis of those make them generalize that this tense is used to denote an action that is going on at the time of speaking.

vi. From Empirical to Rational

Empirical knowledge is that which is based on observation and firth and experience about which no reasoning is needed at all. It is concrete, particular and simple. We can feel and experience it. On the other hand rational knowledge is based upon arguments and explanations. For example suppose the students are to be taught that water boils on heating. They should first be made to heat the water and see it boiling. Then the teacher should explain that when water is heated, the molecules gain kinetic energy and there is thermal agitation of the molecules which make the water boil. This maxim is an extension of some of the previous maxims, namely proceed from simple to complex proceed from concrete to abstract and from particular to general.

vii. From Induction to Deduction

The process of deriving general laws, rules or formulae from particular examples is called induction. In it if a statement is true in a special situation; it will also be true in other similar situations. It means drawing a conclusion from set of examples. For example when hydrogen reacts with boron, it gives Boron hydride, potassium reacts hydrogen, it gives potassium hydride, we come to the conclusion that all elements when reacts with hydrogen they from hydrides. While using this process in teaching, a teacher has to present particular examples or experiences and tell about similarity of their attributes. Deduction is just opposite of induction. In it, we derive a certain particular conclusion from general laws, rules or principles. For example in language teaching, before giving the definition of noun, the students are acquainted with the example of noun like man, chair, Delhi etc and then they are led to general definition of noun. So a good teacher always proceeds from induction and finishes at deduction.

viii. From Psychological to Logical

Modern education gives more emphases on psychology of the child. The child`s psychological development is of utmost important than any other thing. A teacher while teaching should follow this maxim namely from psychological to logical. Psychological approach takes into consideration the pupil his interests, abilities, aptitudes, development level, needs and reactions. The teacher should keep in mind the psychological selection of the subject matter to be presented before the pupils. Logical approach considers the arrangement of the chosen content into logical order and steps. It is child-centered maximum. For example, a teacher tells the story of a poem to students when they are not interested in reading, with this a teacher proceeds from psychological to logical sequence.

ix. From Actual to Representative

A teacher while selecting the content for presentation should make all efforts possible to present it through actual, natural or real objects than from their improvised representative one's like pictures, models etc. First hand experiences makes learning more vivid and efficient than to give them representative ones. For example to teach about 'Golden Temple Amritsar', a teacher should try his best to visit the actual place and that learning will be

more vivid and the pupils will retain it for a long time in spite of teaching through sketches, model or a picture. Representative forms should be used at the higher classes than in lower classes.

x. From Whole to Parts

This maxim is the offshoot of gestalt theory of learning whose main emphasis was to perceive things or objects as whole and not in the form of parts. Whole is more understandable, motivating and effective than the parts. In teaching, the teacher should first give a synoptic view of lesson and then analyze it into different parts. For example the teacher while teaching the pollination in plants, he should first take the flower then analyze it into different parts and give detailed information about each and every part like the sepals, petals, androceium, gynoceium etc. In this way, maximum learning is possible. It is actually the reverse of the maxim "analyses to synthesis".

xi. From Definite to indefinite

A teacher should always start from definite because definiteness has its limited boundaries and jurisdiction than indefinite things. We always have confidence on definite and tested things. We learn easily indefinite things on the basis of definite things. Hence a teacher while teaching any content should first present definite things, ideas and then he can learn indefinite things easily. Definite things, definite rules of grammar help the learner to have good knowledge. Gradually he can be taught about indefinite things.

The above given maxims are only hints and guidelines for the teacher, especially at the initial stages. He may use them if he finds some of them useful in his teaching situations. In some situations of class-room teaching, he may not use them if he feels so. The teacher should keep the maxims in his hand and he should remain their master. Then only the different maxims will remain tools and yield better result. These settled principles, tenets, working rules or general truths through which teaching becomes interesting, easy and effective are called the maxims of teaching. They have universal significance. Every person who is expected to enter into the teaching profession has to familiarize himself with the maxims of teaching. Their knowledge helps him to proceed systematically.

5.5 CURRICULUM TRANSACTION AND MODES

Curriculum Transaction

Curriculum Transaction is the effective and desired implementation of the curriculum contents on the basis of aims and objectives listed in the curriculum. Curriculum Transaction incorporates effective planning for providing learning experiences for its learners, organization of planning, administration / implementation of the organized planning and evaluation of the implementations by the implementer and the experts in the relevant field.

Modes of Curriculum Transaction

Transactional modes have essentially been of two categories:

i. Face-to-Face Mode

The face-to-face mode refers to instructional interactions in which learners and the teacher transact a curriculum in a face-to-face situation. This mode includes inputs like seminars, discussions, lectures, demonstrations and any activity involving direct interaction between the learners and the teacher. The face-to-face mode is the oldest and most widely accepted mode. Obviously, at a time when electronic media were not available and even the print medium was unknown, the most easily accessible channel for transmission of knowledge and for communication was through face-to-face interaction with the teacher. With printing and the public school system, text books became available and assumed significance. Over the years, the print medium has provided support to oral communication with the teacher, as the main focus in schools.

ii. Distance Mode

The distance mode, as the term indicates, pertains to all kinds of interactions between the teacher and learners in which they are not in direct contact with one another and require a third channel or medium for contact. These include the print, audio, video, or any other mode. Open learning systems generally utilize such modes. Due to the indirectness of the contact or the distance between the teacher and learner, none of these media can by itself suffice for effective instruction. They are, therefore, used in combination in order to make experiences more ‘realistic’ and meaningful. Of late, more interactive media have been designed and utilized, such as interactive satellite television or teleconferencing. The two modes need not be mutually

exclusive. Correspondence education acquired significance as an alternative to 'teacher talk' in India, with increased availability of printing facilities. As correspondence education widened with the emergence of open learning system, the media of transaction were diversified to include audio, visual and audio-visual mechanisms. More recently, interactive television has come to be used for communication of knowledge. The use of media has resulted in new roles for a teacher: that of a designer and developer of these media making them suitable for instructional purposes, and that of a user of these during instruction.

Check Your Progress 1

Notes: a. Write your answers in the space given below.
b. Compare your answers with those given at the end of this unit.

1. Write any five roles of Curriculum Supervisor.
   .....
   .....
   .....
2. What does facilitate 'From Known to Unknown' maxim?
   .....
   .....
   .....
3. Give any two benefits of 'from whole to parts' maxim.
   ……
   ……
   ……
4. What is meant by 'face-to-face'?
   .....
   .....
   .....

5.6 ROLE OF TECHNOLOGY

Among the most significant forces for change in recent years is the technological sophistication we now posses., for the sophistication not only affects our lives in profound ways but also seems to hold tantalizing promise for increasing our efficiency in education (Kinder,1973). The last 90 years have seen the development of steam driven, high speed rotary presses, advanced optics, films, writ and tape sound recordings, simple and complex duplicating and copy machines, radio, television, computers, tablet, smart phone and social media. Today, many countries around the world use technological advancement in curriculum approach especially few of them use

this technology fair. Most technological devices and programme however, are structured around the needs of the students and are employed in classroom for effective transaction of curriculum. It is inevitable using media in the class rooms for its transaction of curriculum.

As the concept of Educational Technology (ET) developed, the term 'technology of education' came into vogue. This looked at education in a wider sense, and included various aspects such as entry behaviour of the learner, objectives, content analysis, evaluation, etc. By the mid 1970s, ET borrowed the terms 'systems approach' from management studies and 'corrective feedback' from cybernetics. This widened the scope of ET as the teaching-learning process was examined in a holistic manner. The arrival of digital convergent media encouraged interactivity and interconnectivity. This added a new dimension to ET. The universally accepted definition of ET involves processes, methods and techniques, products, resources and technologies organized into workable systems. The recognition of the need for a multilevel organisation of a classroom, for instance, along with the designing of an appropriate programme and its implementation, becomes as much an exercise in ET as the use of audio-visual aids or the information superhighway. Efforts Initiated by the Government Mass media like radio and television have been used in a sporadic fashion for education for a long time. One of the earliest systematic and large-scale efforts in India to run an educational television channel was SITE (Satellite Instructional Television Experiment) in 1975–76, which was beamed to six states, and is well documented. Many innovations were undertaken in SITE in both devising and deploying suitable hardware and making original software. This software was made by many agencies other than Doordarshan, which until then had a monopoly on video production and broadcasting in the country. In this connection, the work done by AIR in its Vigyan Vidhi programmes to disseminate scientific information to students and teachers, or state and AIR efforts in the project mode in Maharashtra and Rajasthan, have been prominent. However, the supportive structure that these programmes needed could not be maintained for long. The first television inputs in education did not have any worthwhile support systems.

With new directives from the Ministry of Human Resource Development (earlier known as the Ministry of Education), the close coordination between the state units and the central unit virtually came to an end. The launch of the Indian National Satellite (INSAT) in 1980, and its availability for educational purposes, led the Ministry of Education to take over the production of educational television programmes for transmission via Doordarshan. INSAT for Education was conceived as a tripartite project, and was supported by UNDP, UNESCO, and GOI. Under its guidance, an Educational Technology Division in the Ministry of Education was set up; CET was merged with the Department of Teaching Aids of NCERT and was renamed as Central Institute of Educational Technology (CIET); some of the ET cells in the states were upgraded to State Institutes of Educational Technology (SIETs) and ET cells were opened in some other states.

The application of media in education in an Indian situation must take into account the availability of software and access to hardware. the educational system has failed to appreciate the usefulness of the media programmes in their educational plans. Television and radio sets were supplied to schools over many years. AIR and Doordarshan were chosen as the carriers for the broadcasts. As production and broadcasts began, equipment and personnel were put in place. So far as CIET and the SIETs were concerned, the production of video and audio programmes became their main work.

Indian experiments in taking computers to schools involved the participation of a large number of institutions for tasks such as the supply of hardware and software, the development of Computer Assisted Learning (CAL) packages, and the training of teachers. A project called Computer Literacy and Studies (CLASS) launched in 1984 was a joint initiative of MHRD, Department of Electronics, and NCERT. It covered 42 Resource Centres and 2,582 schools. It made use of microcomputers provided by the BBC. The evaluation of the project by SAC revealed the need for greater interaction between resource centers and project schools, the need to reduce the time gap between the training of teachers, the installation of systems, and the initiation of activities in schools, the imparting of adequate hands-on experience to teachers and students, and the provision of computer literacy programmes in the timetable.

The project had only a limited success, and has been described as best as a "spectator sport".

5.6.1 Challenges in Education

'Learning without Burden', the report of the Yash Pal Committee of 1993, has extensively reported on the ills of the present education system. Briefly, it has shown how the education system has become highly centralized, examination driven, joyless, impersonal, and utterly irrelevant to the child's world. The centralization deprives teachers of the freedom to organize teaching learning and meaningfully participate in the preparation of syllabi or textbooks. This in itself is bad enough, but now in addition to what is happening in India, it has become necessary to face the challenges of a rapidly changing world in the twenty-first century. As the world shrinks on account of developments in science and technology, these changes affect Indian society (and other countries, too) increasingly in many different ways. The world today is a global village, and this represents unprecedented challenges for Indian Education. No society can live in isolation. This reality has a bearing on social processes in both the world as well as in India. This process has been going on for some time, but in the last ten years the pace at which the world is changing is becoming greatly accelerated. Some special features of this changing world are:

i. Knowledge Explosion

A decade ago, the knowledge base of humanity used to double every ten to twelve years; now it doubles every two to three years.

ii. Technological Explosion

A very important factor impelling change has been the technological explosion, particularly in the area of ICT (Information and Communication Technologies). Such technologies are double-edged swords. They allow people to contact one another and exchange ideas very easily in order to create communities built around common interests and common causes. They also make it possible for global corporations to move billions of dollars around the world with the click of a button. This gives them tremendous power over local and national economies, especially of Third World countries like India.

iii. Homogenization of the World

As mass production leading to profits means mass consumption, global corporations like to disinvest the world societies of diversities and pluralities, something that India has always cherished and deeply valued. The more homogenized the communities of the world become, the more effective their media and marketing reach can be. Multinational giants, therefore, pose a threat to diversities of both the environment and culture. The scenario of competition leads to aggression and violence, which strip human beings of the essence of humanity, living in cooperation and harmony with others and with their surroundings. This attack of the global corporate empire needs to be met by teaching young people democratic values and equipping them with a sense of discernment so that they can choose the right way to build a better world. Open sources, which are now increasingly becoming available, can help break corporate monopolies. These new technologies used in the right way can empower ordinary people, and ET can thus become a tool in this struggle that is taking place all around us. The Internet and the Web provide alternative sources of information and connectivity across the world to people who share similar interests and concerns. This could help in creating several power centres in the peripheries that would correct the imbalance of central rule in every sphere, including education. It would then become possible to look at knowledge not as something that comes from a central source, but that emanates from all around us.

iv. Population Explosion

Another important factor behind change is the population explosion. Globally, population has increased several folds, but the strange fact is that while the population in the developed world is declining, it is increasing at a phenomenal rate in the developing world. A special demographic feature in India is that the country has one of the world's youngest populations. Furthermore, in the next decade, it is expected that over half of these young people will be below twenty years of age. This number itself will pose an unprecedented challenge, and we have nowhere to look for a solution, as no country in the history of the world has ever had to face this problem. Given our track record in bringing children to school, keeping them there, and attempting to provide them with a decent education, conventional solutions

will not suffice. It is a major challenge to provide large-scale access to all sections of children, including the 10 per cent or so who are disabled, especially when education must also be equitable and of good quality.

v. Scarcity of Resources

In the absence of assured access to alternative support materials-libraries, teaching aids, audio-visual material, and textbooks have come to play a dominant role in the teaching-learning process. Textbooks combined with examinations, which test what has been memorized from textbooks, have exerted a stranglehold over the educational system in India; they have thwarted all attempts at curricular reform and have even undermined the goals of education.

5.6.2 Fore Steps in Technology/Media Integration

- We must realize that knowledge springs from many sources, and that whatever is of importance in the learner's environment and suitable for his/her needs is what we must find and use in any teaching-learning system by employing effective instructional designs.
- The systems that ET specialists (teachers, parents, and educationists) would have to think about would therefore have to be diverse. Efficient teaching-learning systems at every level, which use available resources and appropriate technologies and processes, and which are flexible enough to effect changes based on observations and evaluations, are the need of the hour
- The vast numbers of children who need to be brought under educational systems pose a problem of scalability. Here the new technologies and the mass media can help, but they must be woven into the system in such a manner that they give good results.
- Interactive rather than disseminative programmes are desirable. This expertise needs to be built up. The Internet and the Web provide sources other than local ones. But it is necessary to inculcate media awareness in our children so that they do not replace the words of tradition by the mantras of advertisers.

- The major responsibility for bringing about this change falls on the shoulders of teachers. ET is not a subject in any syllabus except in teacher-training institutions. Information with respect to the ET needs of the curriculum have been passed on to the Focus Group on Teacher Education. Networking of teacher-training institutions and universities that offer ET courses is necessary.
- Building alternative systems of education in addition to schools is the need of the hour. Whatever alternative systems exist on the ground need to be made less bureaucratic in their operations, and they should also be reoriented to carry out their tasks more efficiently.

Alternative models of education, distance and open-learning models, on-demand education, and similar flexible models of learning will have to be tried and established. Flexible systems, futuristic curricula, and a twenty-first-century career orientation have become necessary for young people today.

5.6.3 NCERT Proposal for Action

Under the University Grants Commission's (UGC's) Consortium of Educational Communication, we have a network of over 17 Educational Media Research Centre (EMRCs) and Audio Visual Research Centres (AVRCs). More than 250 universities offer ET as an optional subject in B.Ed. and M.Ed. courses. Technical Teachers Training Institutes (TTTIs) also have facilities for technical education. Several state open schools, the National Institute of Open Schooling (NIOS), several state open universities, the national Open University, Indira Gandhi National Open University (IGNOU), and the distance education departments of conventional universities all have facilities to provide learning through alternative modes. However, all of them suffer from authoritative and exclusionary traditions. They must learn to collaborate, share, and revitalize themselves in order to meet the educational challenges that the future will bring. The Focus Group proposes that serious thought should be given to making these institutions more effective and to gear them towards the need of providing equitable and high quality education with access to all.

5.7 CURRICULUM APPROACH AND MEDIA

Media have come play a fundamental role in modern society. The mass media are media of communication - news paper, magazines, television, radio, movies, videos, and other form - that reach mass audiences. Marshal Mcluhan says that media are any extension of man which allows him to affect other people who are not in face-to-facre-contact with him. He argues that media influence society more in terms of how they communicate than in terms of what they communicate. He says that electronic media are creating a global village, a community in which people throughout the world see major news unfold and hence participate in the same event.

5.7.1 Categories of Media

Media can be classified into two major categories. They are:

- Print Media and
- Electronic Media

a. Print Media

Among the various mass media, print can be considered to be the first born, radio, films and television came much later. Printing was an ancient art among the Chinese. Print media includes a rich variety of production. Books, magazines, newspapers, pamphlets, posters, broachers, journals, calendar, cards, labels, and tickets – in fact everything that comes out of a press constitutes print media.

b. Electronic Media

The rise of mass media and the rise of mass education are closely connected because of the learner's ability to read write to public share. Electronic media operates with support of electronic power known as electronic media. These are radio, television, computer etc., Mass media education is now largely dependent on electronic media which has a good number of advantages.

- Electronic media facilities diverse learning objectives
- Electronic Media through the variety and newness can motivate the learner, stimulate imagination, create and sustain interest.
- Electronic media helps in involving the learner in the teaching/learning process and keeps the concentration going.
- They can cater to the individual needs and reduce the teachers' burden

Nature of Media Impact

It is generally agreed that, in spite of value, effect research has yielded few reliable correlations:

- The familiar difficulties of separating out the precise influence of the media from a range of other social influences (family, peer group, social class etc.,)
- The difficulties of separating media products from the social, legal, historical and economic context in which they are produced, circulated transmitted and consumed

It is rather to argue that more suitable distinctions and more sophisticated conceptual tools, will be necessary if we are to begin to makes sense of impact of which mass communication media have upon educational institution and the claims. All members of UNESCO workshop where agreed that the audio-visual media where powerful, 'alternative teachers' and that they content constituted a 'parallel curriculum' to that of school.

Problems Associated with Media Influence

- Problems associated with defining both the volume and complexity of patterns media conception
- Problem of assessing the impact of media content
- Problems associated with medial reception

Need of Aware of Media in Curriculum

The need to be aware of:

- The dangerous of inferring media
- Media content will be treated and used in different ways of using different audiences
- That audiences of children know less than audiences of adults, may be segmented by such characterized as gender, age, class, ethnicity, education, parental income etc., and that these characteristics are likely to have some influence upon media taste and perceptions

Determinants of Media Selection in Education

- What kind of use (primary, secondary and tertiary) being made of?
- What kind of media using (TV, radio, magazine etc.,) ?
- What kind of decoding of (Accepted, rejected and negotiated)?

- What kind of content (fantasy, reliable, fiction and factual representation)?
- What kind of young pupil (pre-school or young adults; boys or girls; black, brown or white; middle or working class; affluent or poor; rural or urban)?

5.7.2 Impact of Media on Curriculum

i. Educational Broadcasting

In all most all countries, educational broadcasting enjoys low status within broadcasting institutions. In this situation, it could be immense value, if educational broadcasting institutes could be collaborated in integrating enormously wide range of all broadcast materials into an effective pedagogy either for teaching about the media specially or teaching for other more traditional areas of curriculum.

ii. Media as Aids to Learning

The media can and should be used as aids to learning and that media offer a relatively unhampered passage to experience continuous to have perhaps the wide currency of all in the classroom throughout the world. At its simplest way involve nothing more that the illustrative use of images in textbook or of photographs, slides, and films across the curriculum. The use of media as aids to learning and media technology as a service agent does tend in practice to be linked with a view of media as neutral transmitter of ideas and information, and also to the making of quite rigid distinctions between the educational uses of the media and that prolific informal non-educational use.

iii. Media as Disseminator of Knowledge and Experience

The Media actually challenges distinctions between educational and non-educational uses of media and the reality escapist function whilst, still remaining within the 'media-as-aids-to-learning' paradigm, this approach recognize the dangerously wide gap which can exist between what is happen hermitically sealed world of classroom, and environment, rich in educational possibilities, to which pupils are exposed out of it. It attempts to close the gap by making practical links between school and out-of-school educational influences amongst them the media. Yet in conceptualizing the media as part of the environment and linking the media with other sources influences upon

the child, this view has not yet moved beyond the media relatively unproblematic sources of experience. It is a view to which media education movement offers an explicit challenge.

Check Your Progress 2

Notes: a. Write your answers in the space given below.
b. Compare your answers with those given at the end of this unit.

1. What are the challenges of Education?
   ……
   ……
   ……
2. What are the major fore-steps in Technology integration?
   ……
   ……
   ……
3. What are the two broad categories of Media?
   ……
   ……
   ……
4. What are the determinants of Media Selection in Education?
   .....
   .....
   .....

5.8 MODELS OF TEACHING

Teaching is not just to sit on an armchair with a cup of tea in hand to sip. It is an art and skill to be learnt. It requires the knowledge of subject content, method, techniques and teaching aids to be used for making teaching interesting and effective. This is the main objective of education. For this purpose, the teachers need a variety of approaches. Several models of teaching have been developed out of which Bruce Joyce and Marsha Weil's (1980) have been to be very effective. They described model of teaching as a plan or pattern that can be used to shape curricula (long-term courses of studies), to design instructional materials and to guide instruction in the classroom and other settings. Hence, Model of teaching can be defined as 'instructional design which describes the process of specifying and producing particular environmental situations which cause the students to interact in such a way that a specific change occurs in their behavior'. Models of teaching have been developed to help a teacher to improve his capacity to reach more children and create a richer and more diverse environment for them. Model of teaching

consists of guidelines for designing educational activities and environments. It is meant for creating suitable learning environments. In other words, "Models of Teaching" describe teaching, as it ought to be. Models of teaching, therefore, have been developed to help a teacher to improve his/her capacity to reach more children and create a richer and more diverse environment for the learners.

Nature of Models of Teaching

- Prescriptive strategies to guide planning and instruction
- Supported by research based-evidence
- Detailed overview of how to teach
- Role of instructor
- Type of classroom structure
- Ways teacher supports student efforts
- Provide common language to discuss facets of instruction common across all classrooms among administrators and teachers
- Increases probability of learning certain skills/knowledge
- Promote awareness about how individuals and collective faculty teach
- Helps students learn how to learn
- Conceptual frameworks grouped by purpose and intended outcomes

Need of Models of Teaching

- Meet learning needs of heterogeneous groups
- Varied outcomes, different levels of sophistication
- Repertoire of approaches

Benefits of Models of Teaching with respect to Teachers

- Inquiry Training Model Improves the quality of instruction
- It provides Systematic approach to planning for instruction
- It facilitates awareness about students' learning needs
- It also Assesses impact of instruction
- It Offers alternative ways of representing content / skills
- It develops learning experiences that yield successful outcomes
- It facilitates student engagement in more meaningful ways
- It helps in Explicit use of teaching models can accelerate rate of learning, capacity and facility in learning

ii. Benefits of Models of Teaching with respect to Students

- It increases aptitude for learning and retention
- It helps in making learner learn more rapidly
- Facilitates different kinds of learning
- It builds academic self-esteem
- It acknowledges characteristics and aptitudes
- It promotes student awareness of how they will be taught and what changes are sought

Advantages of Teaching Models

- Teaching models specify the learning situation for observing pupils' responses
- They help in realization learning objectives in an expected direction
- They help the teachers in planning and organizing effective teaching by selecting appropriate content, teaching strategies and audio-visual aids
- They help in planning curriculum and its implementaion

5.8.1 Inquiry Training Model

Richard Suchman propounded Inquiry Training Model. He used this model to teach learners a process how to investigate and explain unusual phenomena. In this model thinkers and scholars try to organize knowledge and make various principles. Suchman's model was developed on the basis of analysis of different methods utilized by the creative researchers particularly in physical scientists. He identified several elements of their inquiry process. On the basis of this, he developed Inquiry Training Model.

The theory given by Suchman indicates the following:

- People inquire naturally when they are puzzled.
- They can become conscious of and learn to analyze their thinking strategies.
- New strategies can be sought directly and added to the student's existing ones.
- Cooperative inquiry enriches thinking and helps students to learn about the tentative emergent nature of knowledge and to appreciate alternative explanations.

Information-processing models emphasize ways of enhancing the human being's innate drive to make sense of the world by acquiring and organising data, sensing problems and generating solutions to them, and developing concepts and language for conveying them. Information-Processing Family consists of seven models, including Inquiry Training Model. Inquiry learning provides opportunities for students to experience and acquire processes through which they can gather information about the world. This requires a high level of interaction among the learner, the teacher, and area of study, available resources, and the learning environment, students become actively involved in the learning process as they:

- Act upon their curiosity and interests
- Develop questions
- Think their way through controversies or dilemmas
- Look at problems analytically
- Inquire into their preconceptions and what they already know
- Develop, clarify and test hypotheses
- Draw inferences and generate possible solutions

Assumptions of Inquiry Training Model

- All knowledge is tentative
- Most of the problems are amenable to several equally plausible explanations. There is no one particular answer to a problem
- Inquiry is natural. All of us often inquire when confronted with a problematic situation or puzzle
- An individual can be made amenable to the process of inquiry. He can be made to learn to analyse his thinking strategies
- In addition to what is already known to an individual, he may be taught the new strategies to enquire and explore things
- The inquiry process is a co-operative effort. It is always facilitated by the 'give and take' of ideas

Objectives of Inquiry Training Model

- To develop the scientific process skills
- To develop among students the strategies for creative inquiry
- To develop among students independence or autonomy in learning

- To develop among students the ability to tolerate ambiguity
- To make students understand the tentative nature of knowledge
- To develop the spirit of creativity among students

Elements of Inquiry Training Model

1. Focus: The goal of this model is to help students develop the intellectual discipline and skills necessary to raise questions and search out answers streaming from their curiosity

2. Syntax: the Inquiry Training Model has five phases:

- Confrontation with the problem
- Data Gathering (Verification)
- Data Gathering (Experimentation)
- Organizing, formulating an Explanation
- Analysis of the Inquiry Process

3. Social System: Inquiry Training model provides high weight to the controlling of social system. Teacher and students, however participate as equals where exchange of ideas is concerned;

4. Principles of Reaction

- Ensuring that questions are phrased so that they can be answered in 'Yes' or 'No'
- Asking students to rephrase invalid question
- Neither approving nor rejecting student theories (hypotheses)
- Pressing students for clear statements of theories and more support for generalizations
- Encouraging interaction among students

5. Support System: A set of confronting materials and resource materials bearing on the problem for inquiry are needed. Sometimes the materials are not available. Teachers will have to develop such materials

6. Application: This model was developed for natural science to start with, but its procedures can be used in all subject areas. Any event topic from a curriculum area, which can be converted into a problem situation, can be selected for inquiry training.

Advantages of Inquiry Training Model

- It develops the scientific process skills
- It develops among students the strategies for creative inquiry
- It develops among students' independence or autonomy in learning
- It develops among students the ability to tolerate ambiguity
- It makes students understand the tentative nature of knowledge
- It develops the spirit of creativity among students

Limitations of Inquiry Training Model

- This model does not help in teaching primary content or subject matter, for example, new concepts and formula
- In this model, the student cannot effectively arrive at generalization through inquiry. In such cases simulation may be more useful
- It cannot be applied to puzzles which do not have a cause-effect relationship.

A model of teaching is basically designed to achieve a particular set of objectives. It is not a substitute to teaching skill; rather, it creates conducive teaching- learning environment in which teachers teach more effectively, by making the teaching act more systematic and efficient. The Inquiry Training model promotes the processing skills which are helpful for inquiring. The process skills therefore include the observing, collecting and organising data, identifying the variables in a situation, formulating hypothesis based on cause-effect relationship, experimenting or otherwise listing the hypothesis, inferring and drawing conclusions.

Check Your Progress 3

Notes: a. Write your answers in the space given below.
b. Compare your answers with those given at the end of this unit.

1. Enlist the benefits of Models of Teaching with respect to Students.
   .....
   .....
   .....
2. What are the Objectives of Inquiry Training Model?
   .....
   .....
   .....

5.8.2 Concept Attainment Model (CAM)

Concept Attainment is an indirect instructional strategy that uses a structured inquiry process. It is based on the work of Jerome Bruner. Concept Attainment Model fits most logically into is critical thinking. In most critical think texts. Critical thinking is divided into deductive and inductive thinking. CAM is an inductive strategy that encourages students to look for patterns to hunt for characteristics. The brain research tells us the brain enjoys searching of patterns. The Concept Attainment Strategy is based on the assumption that one of the best ways to learn a concept is by seeing example of it. Because examples are central to the concept attainment activity, special attention must be paid to the selection and sequencing. In concept attainment, students figure out the attributes of a group or category that has already been formed by the teacher. To do so, students compare and contrast examples that contain the attributes of the concept with examples that do not contain those attributes. They then separate them into two groups. Concept attainment, then, is the search for and identification of attributes that can be used to distinguish examples of a given group or category from non-examples.

Purpose of Concept Attainment Model

Concept attainment is designed to clarify ideas and to introduce aspects of content. It engages students into formulating a concept through the use of illustrations, word cards or specimens called examples. Students who catch onto the idea before others are able to resolve the concept and then are invited to suggest their own examples, while other students are still trying to form the concept. For this reason, concept attainment is well suited to classroom use because all thinking abilities can be challenged throughout the activity. With experience, children become skilled at identifying relationships in the word cards or specimens. With carefully chosen examples, it is possible to use concept attainment to teach almost any concept in all subjects.

Steps of Concept Attainment Model

i. Select and define a concept
ii. Select the attributes
iii. Develop positive and negative examples
iv. Introduce the process to the students
v. Present the examples and list the attributes

vi. Develop a concept definition
vii. Give additional examples
viii. Discuss the process with the class
ix. Evaluate

In concept attainment, the student compares like examples and contrasts them with unlike examples. These characteristics can be applied to distinguish examples of a concept from non-examples of concept. Here, teacher is to engage students in thinking related to concepts; to help them meaningfully grasp the designs of a concept; to own it; to think and be creative with it. The reason for this is that our understanding of concepts is how we represent what we know; it brings meaning to facts, principles, systems, theories, et. The teacher's role is to decide what concepts need to be understood in order to be clarity in thinking. So, science teaching is, in part, represented by the instructional strategy of concept attainment.

Key things to remember about Concept Attainment Model

- It is an inductive strategy rather than telling students it encourages students to find out what things have in common for themselves; the payoff is that students remember
- It involves presenting examples and non-examples of a concept
- State with a few fun/easy data sets first so that learners get the idea of the process
- Everything that you can see, touch, feel, taste, smell, hear, describe or label is an example of a concept
- Remember, teacher can always do mini-lecture to clarify or extend their thinking if they struck
- With showing example, teacher should be prepared to share at least ten 'Yes' or 'No' examples
- The focus statement is important in assisting students to move clearly analyze the data set
- Given talk is critical for intellectual growth, then using cooperative group structures like think / pair / share

Fundamental Elements of Concept Attainment Model

- *Focus:* In practice, the model works as an inductive model designed to teach concept through the use of example. The three variations of model have the common target.
- Principles of reaction: It guides the teacher's response of the learner.
- *Support System:* Concept attainment lessons require that positive and negative exemplars be presented to the students.
- *Social System:* In the CAM, the teacher is the controller of the situation. The three major functions of the teacher are to recording, prompting and presenting additional data if required.

Phases of Concept Attainment Model

Phase I: Presentation of data Identification of Attributes of Concept

- Teacher presents unlabeled examples
- Students inquire which examples are positive ones.
- Students generate and test hypotheses.
- Teacher presents labeled examples (both positive and negative)
- Students compare the attributes, in positive and negative attributes.
- Students generate and test hypotheses
- Students name the concept, state definition

Phase 2: Testing attainment of the concept

- Students identify additional unlabeled example
- Students generate examples
- Teacher confirms hypothesis, names concept

Phase 3: Analysis of thinking strategies

- Students describe thoughts.
- Students discuss type and number of hypotheses

Advantages of Concept Attainment Model

- It helps in making connections between what students know and what they will be learning
- It helps in learning how to examine a concept
- It helps in learning how to sort out relevant information
- It extends their knowledge of a concept by means of classification
- It helps in improvement of retention among the learners.

"Concept attainment is designed to clarify ideas and to introduce aspects of content. It engages students into formulating a concept through the use of illustrations, word cards or specimens called examples. Students who catch onto the idea before others are able to resolve the concept and then are invited to suggest their own examples, while other students are still trying to form the concept. For this reason, concept attainment is well suited to classroom use because all thinking abilities can be challenged throughout the activity. With experience, children become skilled at identifying relationships in the word cards or specimens. With carefully chosen examples, it is possible to use concept attainment to teach almost any concept in all subjects." – California Lutherhan University

5.8.3 Advance Organizer Model

Advance Organizer Model is based upon the Learning Theory of Meaningful Verbal Learning formulated by David P Ausubel, an unusual educational theorist. The theory of Meaningful Verbal Learning applies to situation where the teacher plays the role of lecturer or explainer. The main purpose is to help students acquire subject matter. The Ausubel model is a deductive information processing model designed to teach interrelated bodies of content. He firmly espouses the view that each academic discipline has a hierarchically organized structure of concepts, which form the information processing system of that discipline. He conceptualizes the discipline as levels of hierarchically organized concepts that begin with perceptual data at the bottom and proceeds through increasing levels of abstraction until the most abstract concept appear at the top so as to include or subsume less inclusive concept at lower stages of organization. These concepts are firmly linked to data to have a unique structural character. Like Bruner, Ausubel believes that structural concepts of each discipline can be identified and taught to the students and they then become an information processing system, which serves as an intellectual map, which can be used to analyze particular domain and solve problems within those domains of activities.

In a review of research, Mayer (1984) listed a number of characteristics of Advance Organizers:

- They are typically a short set of verbal or visual information
- They are presented prior to learning a larger body of information
- They contain no specific content from the new information to be learned
- They provide a means of generating logical relationship in the new material
- They influence the learners encoding process.
- The exact form that an Advance Organizer takes is dependent upon
    - ❖ The nature of the learning material
    - ❖ The age of the learner
    - ❖ The degree of prior familiarity with the learning material

Goals of Advance Organizer Model

Advance Organizer Model strengthens Cognitive Structure and enhances retention of new information through Meaningful Assimilation of Information. This model helps in developing Interest in inquiry and Habit of Precise thinking.

Planning for Advance Organizer Model

In the planning phase the teacher has to create an Advance Organizer. This organizer should be more general, abstract, and inclusive than any of the succeeding material in the text. Basically there are three types of organizers:

- Concept Definitions
- Generalizations and
- Analogies

Concept Definition: Definition can be valuable organizers of content when the material is new or unfamiliar. Ideally, the defining statement should possess the characteristics of a good concept definition, in that it states the concept, the super ordinate concept and characteristics of the concept. It is general, abstract and inclusive but does not include totally unfamiliar language or ideas.

Generalization: Because of the student's ability to summarize large amounts of information, generalizations can also be effectively used as Advance Organizers. Generalizations could be used as an organizer to subsume narrower generalizations and anchor specific information.

Analogy: The most effective type of the Advance Organizer is the analogy. The value of an analogy as an Advance Organizer depends on two factors. The first is the familiarity of the analogous element to the students. The second factor is the degree of overlap between the analogy and the ideas to be taught. In all the analogies the new material is linked to something familiar to the student and the number of possible similarities between the two concepts being compared.

Phases of Advance Organizer Model

Ausubel's theory consists of three phases, presentation of an Advance Organizer, presentation of learning task or material, and strengthening the cognitive organization.

Phase I: Presentation of Advance Organizer

• Clarify aims of the lesson

• Present organizer:

- ❖ Identify defining attributes.
- ❖ Give examples or illustrations where appropriate
- ❖ Provide context
- ❖ Repeat
- ❖ Prompt awareness of learner's relevant knowledge and experience.

Phase II: Presentation of Learning Task or Material

• Present material.

• Make logical order of learning material explicit.

• Link material to organizer.

Phase III: Strengthening Cognitive Organization

• Use principles of integrative reconciliation.

• Elicit critical approach to subject matter.

• Clarify ideas.

• Apply ideas actively (such as by testing them)

Functions of Advance Organizer Model

- To provide ideal scaffolding for the stable incorporation and retention of more detailed and differentiated material.

Main Purpose

- To influence cognitive processing in several ways including but not limited to providing prerequisite knowledge or helping learners to make construction between incoming information and prior knowledge.

Advantages of Advance Organizer Model

- Advance Organizer Model is a tool to enhance retention
- It promotes transfer and life-long learning
- It encourages all students equally
- It is easier new information with what already know all the topics
- It helps in students comprehend content prescribed by the instructors more quality
- It provides for Structure the near and distance learning environment

Each of the above models identifies important factors related to school learning and contributes important information as we attempt to answer the question "Why do some students learn more than others?" Over a period of years, the models have been examined, reviewed, revised and edited to fit into today's modern society. Beginning with Carroll (1963) and ending (at least as far as this review is concerned) with Huitt (1995), we see teachers and school systems, families, communities and entire countries having an influence on students' school learning. None of the variables appears to be so influential that we need only pay attention to that particular factor in order to produce the kinds of educational changes we desire. Understanding all the variables and the relationships among each other and to student success may be more than we can expect of any educator. We may never fully grasp the significance of the entire process, but we can make every effort to understand as much as possible as we develop the teaching/learning processes appropriate for the information age. We can also identify the most important variables within a category or subcategory and make certain we attend to a wide variety of variables across the model. Models are useful tools to better understand not

only the learning processes of students, but ourselves as educators. At a glance the models might provide only more questions, but a careful study of the models can provide starting points to begin developing more appropriate educational experiences for our society's next generation.

Check Your Progress 4

Notes: a. Write your answers in the space given below.
b. Compare your answers with those given at the end of this unit.

1. What are the Phases proposed in Concept Attainment Model?
   .....
   .....
   .....
2. What are the three types of Organizers in Advance Organizer Model?
   .....
   .....
   .....
3. What is the main purpose of Advance Organizer Model?
   .....
   .....
   .....

5.9 LET US SUM UP

The approaches of curriculum reflect the person's view of the world including what the person perceives as reality, the values deemed important, and the amount of knowledge he/she possesses. A curriculum approach reflects a holistic position or a meta-orientation, encompassing the formulations of curriculum (the person's philosophy, view of history, view of psychology and learning theory and view of social issues), domains of curriculum (common and important knowledge within the field), and the theoretical principles of curriculum. An orientation expresses a view point and designed the role of learner, teacher, and curriculum specialists in planning curriculum, the goals and the objectives of the curriculum and the important issues that need to be examined. In order to provide effective teaching in the execution of curriculum, it is important to select suitable models of teaching in accordance with the maxims of education. The ultimate aim of education could be achieved through the productive design of curriculum with appropriate approaches of curriculum, selection of teaching models and the suitable

teaching-learning experiences provided with respect to the learners' interests and national demand.

5.10 UNIT END ACTIVITIES

1. Discuss the Effectiveness of Concept Attainment Model in teaching primary level.
2. Visit AIR and Dhoordharsan studios and prepare the report on it.

5.11POINTS FOR DISCUSSION

1. Explain the concept of approaches of curriculum development.
2. Define the term 'models of teaching'. Explain any models with its advantages and disadvantages.
3. Explain the role of media in curricular apaches.
4. Explain the factors in selection of models of teaching.
5. Enlist and elaborate the phases of Advance Organizer Model.

5.12 ANSWERS TO CHECK YOUR PROGRESS

Check Your Progress 1

1. The following are role of the Curriculum Supervisor:

- Plan curriculum with students, parents, teachers and other stakeholders
- Prepare curriculum guides/ teacher guides by grade level or subject area
- Prepare curriculum guides/ teacher guides by grade level or subject area
- Help in the evaluation and selection of textbooks
- Encourage curriculum innovation and change

2. 'From Known to Unknown' maxim facilitates the learning process and economies the efforts of the teacher and the taught.

3. The benefits of benefits of 'from whole to parts' maxim are:

- It promotes the level of perception
- It motivates the learners towards the specific learning

4. The face-to-face mode refers to instructional communications in which learners and the teacher transact a curriculum in a face-to-face situation or in traditional classroom.

Check Your Progress 2

1. The challenges of Education may be stated as:
    i. Knowledge Explosion
    ii. Technological Explosion
    iii. Homogenization of the World
    iv. Population Explosion
    v. Scarcity of Resources
2. The following are the fore steps in technology integration:
    - we must find and use in any teaching-learning system by employing effective instructional designs
    - we should use available resources and appropriate technologies and processes, and which are flexible enough to effect changes based on observations and evaluations, are the need of the hour
    - new technologies and the mass media can help to bring the children under educational system
    - it is necessary to inculcate media awareness in our children so that they do not replace the words of tradition by the mantras of advertisers.
    - Information with respect to the ET needs of the curriculum have been passed on to the Focus Group on Teacher Education.
    - Building alternative systems of education (distance and open-learning models) in addition to schools is the need of the hour and it can be achieved through technology integration / media
3. Media are broadly categorized as:
    i. Print Media and
    ii. Electronic Media
4. Determinants of Media are:
    - Level of Target pupils
    - Kind of media
    - Kind of content
    - Kind of Decoding
    - Kind of pupils

Check Your Progress 3

1. Benefits of models of teaching with respect to students are:

- Increases aptitude for learning and retention
- Learn more rapidly
- Facilitates different kinds of learning
- Builds academic self-esteem
- Acknowledges characteristics and aptitudes
- Promotes student awareness of how they will be taught and what changes are sought

2. The objectives of Inquiry Training Model are listed as:

- To develop the scientific process skills
- To develop among students the strategies for creative inquiry
- To develop among students independence or autonomy in learning
- To develop among students the ability to tolerate ambiguity
- To make students understand the tentative nature of knowledge
- To develop the spirit of creativity among students

Check Your Progress 4

1. Phases of Concept Attainment of Model are:

- Phase I: Presentation of data Identification of Attributes of Concept
- Phase II: Testing attainment of the concept
- Phase III: Analysis of thinking strategies

2. There are three types of organizers in Advance Organizer Model:

- Concept Definitions
- Generalizations and
- Analogies

3. The main purpose of Advance Organizer Model is to influence cognitive processing in several ways including but not limited to providing prerequisite knowledge or helping learners to make construction between incoming information and prior knowledge.

UNIT VI CURRICULUM DEVELOPMENT AGENCIES AND IMPLEMENTATION

Structure

6.1 INTRODUCTION

India is a multicultural society made up of numerous regional and local cultures. People's religious beliefs, ways of life and their understanding of social relationships are quite distinct from one another. All the groups have equal rights to co-exist and flourish, and the education system needs to respond to the cultural pluralism inherent in our society. Curriculum development is defined as planned, purposeful, progressive, and systematic process in order to create positive improvements in the educational system. Every time there are changes or developments happening around the world, the school curricula are affected. There is a need to update them in order to address the society's needs. Curriculum development has a broad scope because it is not only about the school, the learners and the teachers. It is also about the development of a society in general. In today's knowledge economy,

curriculum development plays a vital role in improving the economy of a country. It also provides answers or solutions to the world's pressing conditions and problems, such as environment, politics, socio-economics, and other issues on poverty, climate change and sustainable development. The social context of education in India thus presents a number of challenges, which must be addressed by the curriculum framework, both in its design as well as its implementation. In this unit, we will discuss about the apex bodies in Higher Education in state and central, national curriculum framework committee and its implementation, tools for curriculum implementation and the role of teachers and the effectiveness of their different training programmes in implementing the curriculum associated with the teaching-learning process.

6.2 OBJECTIVES

After going through this unit, you will be able to:

- Acquire knowledge about various Agencies of Curriculum Development
- Understand the role of the various Agencies of Curriculum Development
- Apply the knowledge in analyzing the Functions of The Agencies Of Curriculum Development
- Appreciate the functions of the Agencies of Curriculum Development.
- Evaluate the Functions of the Agencies of Curriculum Development
- Value the highest role the curriculum development agency in school education

6.3 AGENCIES OF EDUCATION

The word 'agency' means operation of an agent. By 'agent' we mean a person or thing that acts or exerts power. Hence agencies of education are those factors which exercise an educational influence on the child. Education usually performs three kinds of functions in the society. Firstly, it transmits special or cultural heritage from one generation to another. It consists of

various experiences, customs, values and traditions of the people. Secondly, education conserves this cultural heritage through its courses of studies, textbooks, instructional materials and different parties. Thirdly, education creates new social organizations and patterns in order to develop and improve the society in view of the changing needs and conditions. In course of time, society has been developing a number of organizations and institutions to discharge various special responsibilities in connection with the functions mentioned above. These institutions and organizations are called the agencies of education. They shape their individuals in many ways. They shape their personalities, their knowledge, understanding, attitude, interests, values and aspirations. They range from primary institution like family to school, playground, clubs and so on.

Agencies for Imparting Education

i. Formal Agencies

Those agencies which are developed with the specific and exclusive aim of imparting education are called the Formal Agencies of Education. They are preplanned in aim, scope and programme. The time and places of their activity as well as the means of their procedure and performance are all fixed and well-regulated. They are kept under a certain code of discipline and regularly supervised. Such agencies include the schools, colleges, Universities, technical institutions, research centers, special training centers, etc.

Merits

According to John Dewey, “Without formal education, it is not possible to transmit all the resources and achievements of a complex society. It also opens a way to a kind of experience which would not be accessible to the young, if they are left to pick up their training in informal association with others”. Hence, we can say that everything is definite and specific about the objectives, learning experiences, desired behavioural changes together with measuring and evaluation techniques.

Demerits

John Dewey says, Formal education easily becomes remote and dead abstract and bookish. What accumulated knowledge exists in low grade societies is at least put into practice. But in advance culture much which has to be learnt is stored in symbols.It is far from translation into familiar acts. There is the

standing danger that the material of formal education will be merely the subject matter of schools isolated from the subject-matter of life experience. Formal agencies promote rote memorization, mechanical rendering of knowledge and does not inculcate thoughts, understanding and insight into the minds of educants. Education, thus provided is generally bookish, artificial and theoretical.

ii. Informal Agencies

There are agencies which grow up spontaneously and also dissolve in the same way. They observe no formalities of rules, regulations and discipline. Their main function is also not the imparting of education. But indirectly they exercise a great educative influence on their members. Through these agencies a lot of education is available to children without effort or cost. Such agencies are called the Informal Agencies of Education. They include the family, the society, the playgrounds, professional organizations, youth- activity groups and the like.

Merits

John Dewey has aptly remarked, "The child is informally educated by living with others and the very process of living together educates. It enlarges and enlightens experience, it stimulates and enriches imagination, it creates responsibility, accuracy and vividness of statement and thought". Thus education imparted through informal agencies leads to initiative, self-planning and self- choosing. It is natural and incidental and is imparted in a free atmosphere without any rigid control and direction. It avoids external forces and stern discipline.

Demerits

It is possible that informal agencies of education may impart Vague Knowledge. Duration and time limits are greatly essential in the preparation of citizens who are to lead their own lives successfully and guide the destiny of their nation. Skills and techniques also cannot be developed through informal agencies. Much time and energy is wasted.

iii. Active Agencies

It is also essential here to distinguish between the active and passive agencies of education. Those agencies which provide for education through the interaction of persons are called Active Agencies of Education. In their case,

education is a two-way process. Both the educator and the educant or the individual and the group, influence each other. These agencies include the family, the school, the church, the playgrounds, the youth-activity groups, the professional organizations, social welfare organizations and the like.

iv. Passive Agencies

But in the present day world, there are many important agencies in which interaction is only a one-way process. They influence the individual but are not influenced by him as such. No doubt, they are subject to public control to a certain extent; but they influence the individual while the individual carries no weight with them. Such agencies are called Passive Agencies of Education. These include the press, the radio, the television, the theatre, the museum, the public library and the cinema.

It is concluded that formal education has little scope for mass education. Informal education is aimless and ambiguous. But non-formal education is the real hope to minimize the gap between both formal and informal and make balance between both. So, in order to give and provide liberal, flexible, standard, cheap and qualitative education as per the need of an individual, society and the country, non-formal education is the best agency. Education clearly means the providing of proper environment for the development of child. The family, the school, the community, the state, the church, the library, the newspapers, the exhibitions, the radio, the magazines, the cinema etc. are the means which provide diverse opportunities for the child to learn something and bring about a modification in his behaviour.

6.4 NATIONAL POLICY ON EDUCATION

We have a large system of higher education. But the developments in this field have been extremely uneven. The facilities provided in Universities and Colleges vary widely. Research in the Universities is cost effective, but large inputs have gone to laboratories outside the Universities. The courses offered by the universities have not been reorganized to meet the demands of the times. Their relevance and utility are constantly questioned. The credibility of the evaluation system is being eroded. The University system should be enabled to move centre-stage. It should have the freedom and responsibility to innovate in teaching and research. The emphasis on autonomy of colleges and

departments, provision of means to interact across boundaries of institutions and funding agencies, better infrastructure, more rationalized funding for research, integration of teaching, search and evaluation, all these reflect this major concern. The National Policy on Education visualizes that higher education should become dynamic as never before. The main features of the programmes and strategies to impart the necessary dynamism to the higher education system will consist of the following:

i. Consolidation and Expansion of Institutions

In order to achieve this, it is proposed:

- to provide appropriate funding to Universities and Colleges according to the norms to be evolved by the University Grants Commission for each specified course and intake:
- to prepare a plan to equip the existing institutions in phased manner on the basis of the norms prescribed
- to establish institutions within the university system which will have close ties with National Laboratories and other agencies; a Task Force will be appointed by the UGC to evolve guidelines for setting up such institutions and their management structure;
- to formulate a scheme by the UGC to provide financial assistance and other incentives, including model statutes for promotion and development of autonomous departments within the universities;
- to review the Management patterns including the structure, roles and responsibilities of various universities/bodies in the light of the new demands on the University system. The UGC will take steps to promote the evolution of new, efficient and more effective management systems and organize wide discussions on them so that they may become the basis of new legislations.
- to take effective steps to ensure that no new institutions are established without careful planning and the provision of the necessary physical facilities;
- to formulate guidelines for granting affiliation to new colleges which should provide, among others, the minimum facilities required in each

institution including new teaching aids such as audio-visual systems, VCRs, computers, etc ; and

- to regulate admission on the basis of physical facilities and to develop entrance examinations for admission to institutions of higher education.

ii. Development of Autonomous Colleges and Departments

In order to achieve this, it is proposed:

- to make provision in the University Acts where necessary, to enable colleges to become autonomous
- to frame guidelines and pattern of assistance including the extent of academic, administrative and financial freedom and the corresponding responsibilities devolving on the autonomous colleges, their management structures, including provisions for safeguarding the interests of teachers, etc
- to formulate a scheme of incentives such as special assistance to selected colleges, creation of posts of Readers and Professors, provision of a higher level of grant for development, etc. to colleges which become autonomous
- to provide special assistance to colleges in tribal/ backward areas to enable them to develop into autonomous colleges
- to make statutory provision, if necessary, to enable autonomous colleges to award their own degrees or to confer deemed university status on them to develop other appropriate mechanisms to accelerate the process of curricular reforms, design of courses, reforms in teaching and evaluation procedures, etc.
- to develop appropriate instruments for review/appraisal of the scheme of autonomous colleges at regular intervals, and to develop interaction among colleges to promote the scheme of autonomous colleges
- to initiate detailed studies to develop alternate methods of university-college relationships that could replace the existing affiliating system in the long run

iii. Redesigning Courses

In order to achieve this, it is proposed:

- to secure full involvement of the Universities and faculties in redesigning and reorienting the courses in higher education
- to review comprehensively the existing guidelines on restructuring courses framed by the UGC to incorporate the new concepts in the design, content and structure envisaged in the policy
- The foundation course proposed in the UGC scheme of restructuring courses will be an important element of the general undergraduate programmes. A special emphasis should be laid on the study of India's Composite Culture so as to foster unity and integrity of the country among students. Women's studies will be one of the components of the Foundation Course. The curricula of different disciplines will also reflect issues concerning Women's status and development;
- to reorganize the Boards of Studies in the Universities to facilitate redesigning of courses and to promote inter disciplinary programmes and inter-faces with employment
- to make provision for academic recognition /credit for participation in creative activities like NSS, NCC, Sports and Games
- to organize regional/national seminars to generate enthusiasm in and commitment to the new design of courses, flexibility in the combinations, modular structure, accumulation of credits etc
- to link development grants to universities with the willingness and interest in reorganization of courses and commitment to innovation as a continuing effort

iv. Training of Teachers

In order to achieve this, it is proposed:

- to organize specially designed orientation programmes in teaching methodologies, pedagogy, educational psychology, etc., for all new entrants at the level of lecturers
- to organize refresher courses for serving teachers to cover every teacher at least once in five years

- to organize orientation programmes by using the internal resources of universities and by bringing a number of colleges together
- to encourage teachers to participate in seminars, symposia, workshop, and orientation/refresher programmes

The Indira Gandhi National Open University will run special programmes to promote self-learning among teachers. The recommendations of the Committee on revision of pay scales of teachers in universities and colleges will be examined for implementation. Teachers will be recruited on the basis of a common qualifying test the details of which will be formulated by the UGC

v. Strengthening Research

In order to achieve this, it is proposed:

- to strengthen the infrastructure and enhance the funding of research in universities
- to set up cooperative research facilities in the university sector
- to locate most of the research institutes to be set up in the future in the universities with appropriate autonomous management structure
- to encourage industries to set up most of their research activities in the university sector
- to foster formal links with various research agencies to link education with research and to identify tasks that could be undertaken within the university system
- to modify curricula and methodologies of learning through appropriate research and development to incorporate elements of problem solving, creativity and relevance;
- to institute talent search examinations and Scholarship schemes at undergraduate and post-graduate levels; to conduct all-India tests for admission to research programmes and to introduce periodic review of fellowships

vi. Improvements in Efficiency

In order to improve the overall efficiency in the functioning of the universities it is proposed:

- to equip every university with a computer for maintenance of students records, accounts and other data required for administration and management
- to establish networking arrangements of selected institutions from all parts of the country by linking them together through a computer data network with terminals for each to enable sharing of information, data banks, library and computation resources
- to ensure access to information and source material essential for research, a network of regional libraries as a common servicing facility will be established. These libraries will be equipped with modern facilities for information storage, retrieval reprography, etc.

vii. Creation of Structures for Co-Ordination at the State and National Levels

a. State Councils of Higher Education

There is at present no effective machinery for planning and coordination of Higher Education at the State level and co-ordination of State level programmes with those of the UGC. In order to fill this gap, it is proposed:

- to set up State Councils of Higher Education as Statutory Bodies
- to have for the guidance of State Governments, model provisions framed by the UGC setting out the composition and powers of the State Councils

The major functions of the Council will include:

- preparation of consolidated programmes of higher education in each State
- initial scrutiny of the development programmes of universities and colleges
- assistance and advice to UGC in respect of maintenance of standards
- assistance to State
- encouragement of the programmes of autonomous colleges

- monitoring the progress of implementation of programmes and assessment of performance of institutions
- advising the State Governments in setting up new institutions

b. National Apex Body

Presently, the responsibility for development of higher education is shared by a number of agencies. There are separate structures for higher education in agriculture, engineering and medicine. This separation in the decision making and funding mechanisms has become more of a problem because various disciplines are emerging, and the courses of study have to be developed keeping in view the need for developing compatible inter-faces with other related disciplines. In order to remedy this problem it is proposed to establish an apex body at the national level for higher education to deal with policy aspects of higher education and to undertake integrated planning and to reinforce programmes of post-graduate education and inter-disciplinary research. For areas such as agriculture, medicine, engineering, distance learning etc. separate bodies will be set up. These bodies structured on the lines of the University Grants Commission, along with UGC itself, will oversee all operational aspects of higher education. The details of the legislation and/or other means for the establishment of these bodies will be worked out. The major functions to be performed by the apex body are:

- to advise Government on Policy
- to coordinate activities of the other bodies in different fields
- to encourage inter-disciplinerity and promotion of interfaces among different areas
- to allocate resources
- establishment and management of common infrastructures and institutions
- coordination of policy concerning external academic relation

c. Accreditation and Assessment Machinery

Excellence of institutions of higher education is a function of many aspects; self evaluation and self improvement are important among them. If a mechanism is set up which will encourage self-assessment in institutions and also assessment and accreditation by a Council of which these institutions are

corporate members, the quality of process, participation, achievements, etc., will be constantly monitored and improved. It is proposed to develop a mechanism for accreditation and assessment for maintaining and raising the quality of institutions of higher education. As a part of its responsibility for the maintenance and promotion of standards of education, the UGC will, to begin with, take the initiative to establish Accreditation 'and Assessment Council as autonomous body. It will evolve its own criteria and methodology for accreditation and assessment. Its main functions will be catalytic; it will not be enforcing any given norms and standards. It will analyze and evaluate institutions and their performance to facilitate self-improvement. This Council will be supported by a professional secretariat in the performance of its functions.

viii. Mobility

The Policy visualizes measures to facilitate inter-regional mobility by providing equal access to every Indian of requisite merit regardless of his origin and emphasizes the universal character of a university. To achieve this objective, the state Governments and Universities will be encouraged to admit students based on merit without any regard to domicile or nativity. Schemes to provide necessary support and guidance to institutions to admit students from other States will be evolved. In order that the all-India character in the composition of the student enrolment and faculty strength is ensured, priority will be given to schemes for construction of student hostels, staff quarters, provision of scholarships, etc. Efforts will be made to move towards the objective of making recruitment of teachers on all-India basis in consultation with the State Governments. Extension service and continuing education programmes will be an essential component of programmes and activities of all the universities. Provision will be made to secure greater involvement of teachers and students in the universities in extension services which will be as important a function of the universities as teaching and research. To promote and strengthen this function provision for academic recognition /credit will be considered in the course requirements.

The NPE 1986 states, The institutions which will strengthened to play an important role in giving shape to the National System of Education are the University Grants Commission, National Council of Teacher Education,

Central Universities, State Universities, State Council of Teacher Education, Directorate of Teacher Education Research and Training, National curriculum Framework Committee, National University for Educational Planning and Administration and National institute for Adult Education will be involved in the process of curriculum development and implementation. Thus our country is moving towards developing a National System of Education, which will help to create a true democratic society where good and abundant is assured to citizens.

Check Your Progress 1

Notes: a. Write your answers in the space given below.
b. Compare your answers with those given at the end of this unit.

1. What are two broad classifications of Agencies of Education?
   ……
   ……
   ……
2. What is the need of non-formal education?
   ……
   ……
   ……
3. What are the main features of dynamism stressed by National Policy on Education?
   ……
   ……
   ……

6.5 UNIVERSITY GRANTS COMMISSION (UGC)

The university education commission of 1948 recommended the constitution of the U.G.C., for providing funds for the universities in Indian and for coordination of standards among the universities. Evens through there was an advisory committee functioning in 1945, it had no funds of its own. So the Radhakrishnan's commission wanted an expert body. To be constituted and so in pursuance of their recommendation, a non statutory University Grants commission was constituted in 1952 to consider the financial needs of the Universities for discharging their responsibilities. With more pressure exerted on the Government of India by vice-chancellor and state education ministers for forming a statutory authority, the University Grants Commission Bills was introduced in the University Grants Commission Act in 1956. The University

Grants Commission became a statutory Authority. According to the U.G.C Act of 1956, the commission will consist of 9 members to be appointed by the Central Government of which three will be from among the Vice-Chancellors, two from officers of the Central Government and the remaining from among persons who are educationists of repute or who have academic distinction. Now, in addition to a full-time chairman, there is a full-time vice-chairman and the total number of the members of the commission is to be appointed by the commission as well as the others in the secretariat. The orders and decisions are to be signed by the chairman and authenticated by the secretary.

Functions of UGC

The University Grants Commission may

- Inquire into the financial needs of the universities.
- Allocate and disburse grants to central Universities for their maintenance and development.
- Allocate and disburse grants to other universities.
- Recommend to any university the measures necessary for the improvement of university education and advise the universities upon the action to be taken for the purpose of implementing the recommendation.
- Advise the central government or any state government on the allocation of any grants to university for any general or specific purpose out of the consolidated fund of the state.
- Advise any authority, if such advice is asked for, establishment of a new university or any proposals connected with the expansion of the activities of any university.
- Advice the central Government or any state government of university on any question which may be referred to the commission by them.
- Collect information on all such matters relating to university education in India and other countries as it thinks fit and make the same available to any university
- Require a university to furnish with such information as may be needed relating to the financial position of the university or the studies in the various branches of learning undertaken by the university,

together with all rules and regulation relating to standards to teaching and examination in that university in respect of each of such branches of learning.

- Perform such other functions as may be prescribed or as may be deemed necessary by the commission for advancing the cause of higher education in India or may be incidents or conductive to the discharge of the above functions.

For the purpose of ascertaining the financial needs or its studies of teaching, examination and research, the U.G.C, may, after consultation with the university, cause an inspection of any department of department, to be made in such a way as may be prescribed by such person or persons as it may deem fit. If any university fails within a reasonable time to comply with any recommendations, the U.G.C, any withhold the grants proposed to be made out of the funds of the commission. The central Government may pay to the commission, such sums as may be considered necessary for the performance of its functions. For further growth of higher education in India through the correspondence courses the U.G.C, has spelt out the detail in the following guidelines.

- Only one University in a State at the Undergraduate level.
- Only well established teaching departments in university to start as per the same standards
- High priority for setting up study centre in area where there is concentration of students
- Provision of contact programmes
- Grant should be earmarked for such programmes are contact programmes, study centers, writing of lessons, core staff, library facilities.
- Correspondence courses at P.G, level should be started only by universities with the experience at the undergraduate level. U.G.C, assistance will be to the extent of Rs. One lakh per subject per annum for 5 years.

Other Areas of Development

- Adult Education programmes.
- Cultural Programmes and later national collaboration programmes
- Development of University Service and Instrumentation Centre
- Development of programmes like COHSSIP. COSIP for improvement of teacher, students, amenities support for innovations.
- Support for autonomous colleges etc,
- Facilities for scheduled cast and scheduled Tribes for highest education by Reservation of seats.
- Higher education for women

The Kothari education commission of 1964-66 has stressed that the U.G.C, should support and strengthen the autonomy of university for the purpose of raising the standards of higher education.

6.6 NATIONAL COUNCIL FOR TEACHER EDUCATION (NCTE)

In May 1993, the ministry of Education, Government of India established National Council for Teacher Education (NCTE) to provide guidance to the Centre and states for solving various problems and to give suggestions for the development. National Council for Teacher Education (NCTE) is a statutory body of the Central Government. It was established in 1995 after the bill was passed by the Parliament. There is an executive Committee and a Regional Committee which work for NCTE. It is an autonomous body for the development of teacher-education like NCERT with head office at New Delhi in the campus of NCERT. The major functions of NCTE come under Act 1993.

Functions of NCTE

- Undertaking survey and studies relating to various aspects of teacher – education and published the results
- Making recommendations to the Centre and State Government Universities, the U.G.C and other institutions in the preparation of plans and programmes in the field of teacher-education
- Coordinating and monitoring teacher-education and its development in the country

- Preparing a guideline with regard to minimum qualifications for the candidates to be employed as teacher-educators at different levels
- Developing norms for any specified category of courses or training in teacher – education, including minimum eligibility criterion for admission
- Preparing a guideline and specified requirements for starting new courses and programmes under teacher education
- Developing a guideline for general teacher-education programme
- Promoting innovations and research studies and organize them periodically or annually
- Supervising the teacher-education programmes and providing financial assistance
- Enforcing accountability of teacher-development programmes in the country
- Preventing commercialization in Teacher-education and maintain quality and standard of teacher education to produce better teachers
- Entrusting responsibility to other organizations, universities and other institutes
- Preparing a programme for in service teacher-education for orienting teachers for latest development
- Establishing international relations in the area of teacher- education

6.7 NCERT

The National Council of Educational Research and Training (NCERT) was established in 1961 as an autonomous organisation. It acts as an advisor to the Ministry of Human Resource Development (MHRD) and is fully financed by the central Government. The Union Minister of MHRD is its President and the Education Ministers of all the States and Union Territories are its members. The other members are the Chairman of UGC, Secretary of MHRD and four Vice-Chancellors from four regions of the country.

Functions of NCERT

The following are the major functions of NCERT

- To promote and coordinate educational Research
- To provide extensive service

- To organize pre-service and in-service training
- To disseminate information on the latest educational technique and practices
- To sponsor organize survey of national importance
- To emphasize the investigations of immediate problems in Indian education

The NCERT works through its main agency. The National Institute of Education (NIE) consists of Information Technology department and four Regional college of Educational (RCE). Through its department of Research, training and extension, the NIE promotes technical competence and experience on educational matters and field works. The NIE has the followings wings:

i) Department of Social Science and Humanities.
ii) Department of science education.
iii) Department of educational psychology and foundations of education.
iv) Department of teaching Aids.
v) Department of text books.
vi) Department of primary and preliminary education.
vii) Department of teacher education.
viii) Data processing and educational survey unit.
ix) Library, documentation and information services.

The Regional College of education at Ajmer, Bhopal, Bhuvaneshwar and Mysore provide for specialized training programmes for secondary school teachers apart from its regular programme of pre-service training. The Education commission of 1964-66 has made the following observations regarding the NCERT:

- The NCERT should be developed as the principal technical agency functioning at the national level for the improvement of school education and operating through and collaboration with the National Board of School Education and their technical agencies like the state institute of education.

- The governing body of the NCRT should have an all India character with a majority of non-official, it is have one outstanding teacher from secondary schools and a person's at best specializing in primary education is primary education, preferably a primary teacher.
- The council should have its own full-time director and joint director. The director should be a five year, renewable for not more the purpose of assisting the director and relieving him of routine administrative matters.
- The central institute of education under the NCERT should be transferred to the Delhi University.
- It is desirable that there should be considerable interchange and flow of officials from the NCERT to the state education department and vice versa.
- The campus of the NCERT should be developed speedily and the building programme given the highest priority.

The NCERT has brought out a number of text books for primary schools and secondary schools which are outstanding ventures in the area. They have also got some source books on science teaching. Their science talents research programme is one of the important activities, the population cell working in NIE has also focused over attention on the need and modules operandi of population education in India.

Educational Research and Innovation Committee (ERIC) in the NCERT is yet another apex body for promotion of Research and innovation in school and teacher education at the national level. Its primary concern is to promote research in education all over the country through grants and training of Research personnel.

Three task forces have been set up for identification of research problems in the field:

- Universalisation of Education,
- Education for the weaker section; and
- Education for social change mainly with a view to identifying priority areas in each of them

The above details give you an idea of the pivotal role played by the NCERT in the development and execution of educational policies.

6.8 SCERT

The State Council of Educational Research and Training (SCERT) were set up in each state on the pattern of NCERT. As education is a state subject, NCERT cannot do much to improve education in the state. The SCERT has a Programme Advisory Committee under the Chairmanship of the State Education Minister. The educational structure at the state level includes the ministry of Education, Secretariat, Directories, State Institute of Education, State Council of Educational and Training, Text Book Board and Board of School Education etc., You have earlier learnt about the UGC and NCERT, here you are going to learn about the SCERT. In some of the state's SCERT is known as State institute of Education (SIE). It is an integral part of the Directorate of Education and is the academic wing of the State Department of Education. It provides academic guidance to the Regional Officers, District Education Officers, Block Education Officers and Principals of Schools. SCERT are headed by Directorates and under them are the Joint Directors of Different sections which include: Physical Education, Audio-Visual Education, Institute of English, Vocational Guidance, Examination Unit, Science Division, Curriculum Development, Teacher Education, Text Books Production and Non-formal Education etc., In Tamil Nadu Council of Education was upgraded as SCERT in the year 1975 as a separate department under a director in the rank of a director of school education. It functions as the academic wing of the education and their main functions are:

i. In-service training,
ii. Extension activity
iii. Training
iv. Research and
v. Publication

The SCERT has been organizing its orientation programmes with the liberal assistance of the Government of Tamil Nadu and the NCERT.

Objectives of SCERT

- To provide induction training for Education department personnel appointed for the first time, to work as Heads of Elementary and Secondary school, supervisors of school as teacher educations.
- To organize conferences and seminars on modern management technique for senior officers (District level and above) of the Education Department from time to time
- To provide in-service training to supervisors of schools, teachers and teachers-education
- To organize conferences of seminars for non-official bearers of local bodies connected with the administration of education
- To provide extension service to primary and secondary schools and training institutions for school teachers
- To provide guidelines to school complexes for their fruitful functioning
- To organize research in all matters relating to school education, either directly through the staff of the council or in collaboration with other educational institutions and agencies
- To improve the progrmme of teacher-education by arranging in – depth studies and other action-research programmes
- To provide correspondence education for teacher: for farther professional improvement of trained teachers
- To produce educational literature including the publishing of journals and other periodical publications for both high schools and elementary schools
- To evaluate such educational programmes as may be selected for the purpose from time to time
- To assist in the revision and improvement of text books and to evaluate and review text books, reading book programmes and procedures
- To conduct experiments and encourage innovations with a view to improve education in all levels
- To improve curriculum and teaching methods and to devise improved teacher-aids and also innovate improvised aids

- To contact programme of orientation to teachers in the concept and techniques of educational evaluation and educational technology
- To conduct studies and investigation on problem of practical nature (such as analysis of question paper etc; on all issues connected with education)
- To translate evaluation materials and publication of education literature
- To improve examination techniques, internal assessment of pupil's attainments and holding seminars and refresher courses for the benefit of teachers
- To help the state Board of Examination to improve the external public examinations conducted by it, at the end of secondary level and higher secondary level when introduced.
- To improve evaluation practices in primary and secondary schools by organizing question banks and to conduct training programmes in evaluation for officers in the Department, Headmasters of schools and examiners and question paper setters of the public examinations.
- To advise the state Education Department on the curricula for and the expected standards at the end of higher elementary and secondary stages.
- To measure the accomplished standards at the end of the higher, elementary and secondary stages from time to time and to publish reports about the manner in which they vary from block to block or district to district in the state at the time suggesting measures for improving standards.
- To improve Science and mathematics education in schools and training institutions by an arranging programmes and action oriented studies.
- To coordinate with the department of school education and Board of continuing Education and other agencies in planning, organizing and other activities concerned with non-formal education.
- To conduct studies and surveys on different aspects of education and collect and maintain education documents for reference and planning.
- To help planning vocation education in the state and to coordinate guidance services.

- To educate public opinion in the states in the need to expansion and qualitative improvement of education.
- To advise the state education department in the preparation and implementation of education plans.
- To act as a clearing house for new ideas and practices and also to serve as a meeting ground for planners at all levels of education (elementary, secondary, training collegiate).
- To serve as the liaison body between the NCERT and state education department.
- To provide in-service programmes and guidance to all educational institutions under various patterns of education such as matriculation schools etc.
- The SCERT has been engaging itself on various wholesome programmes in the recent years, the more significant of which can be mentioned for your information.

The implementation of the following programmes with the assistance from the UNICEF.

- Primary Education curriculum Renewal Project (PECRP).
- This has been attempted in the standard I to V in 30 primary schools in the centers of Aduthurai, Ranipet and Tirupur.
- Development activities in community education and participation (DALEP) in selected centres.
- Comprehensive Access to primary Education (CAPE).
    - ❖ A workshop on environmental education.
    - ❖ Programmes of science Kit Training.
    - ❖ Continuing education centres at Maduari and kumbakonam.
    - ❖ Correspondence courses for teachers handling Tamil in VIII standard for the year 1979-80.
    - ❖ Correspondence courses for Higher Grade Teachers.
    - ❖ Four Teachers' Centres at Madras, Madurai, Tirunelveli in various academic pursuits.

There is also a state Education Consultative Committee which is advised by state advisory bodies.

Check Your Progress 2

Notes: a. Write your answers in the space given below.
b. Compare your answers with those given at the end of this unit.

1. Write any five the guidelines spelt by UGC.
   ……
   ……
   ……
2. Write any five major functions of NCTE.
   ……
   ……
   ……
3. Enlist the major functions of NCERT?
   ……
   ……
   ……
4. What are the main functions of SCERT?
   ……
   ……
   ……..

6.9 TOOLS OF CURRICULUM IMPLEMENTATION

The tools for assessing curriculum should be possessed the following components

i. In terms of Content

- **Theoretical foundation**

  The curriculum is based on current education and behavioral change theory and research. The theoretical underpinnings of the curriculum are described.

- **Research based Content**

  The content of the curriculum is research based, accurate, and current.

- **Balanced Viewpoint**

  The curriculum presents a balanced view of the topic, recognizing any aspects that are not yet clearly understood or open to debate.

- **Learning Objectives**

  It includes clear, measurable learning and behavioral objectives. Objectives are clearly linked to theoretical underpinnings.

ii. In terms of audience

- **Target Audience**

  It identifies the intended audience and is tailored to this audience.

- **Audience Input/ Outcomes**

  It builds on the strengths/assets, needs, and interests of learners. Audience input was used to guide development of materials.

- **Audience Involvement**

  Actively engages the audience in the learning process and promotes behavior change.

- **Reflection of Diversity**

  It reflects the diversity, including health literacy, of the intended audience and it includes multilingual handouts and educational reinforcements when appropriate.

- **Respect for Diversity**

  Ideas and principles included in the curriculum respect all aspects of diversity including health literacy.

iii. In terms of Readability

- **Grammar**

  It reflects standards of written English and correct grammar, spelling, punctuation, and mechanics.

- **Tone and Reading Level**

  All health and insurance terminology is clear, correctly used and spelled throughout content. Correct health and insurance abbreviations are used throughout. The curriculum is written at grade VI or lower if intended for the general public.

- **Organization**

  It is logically and sequentially organized.

- **Style of material**

  Content displays evidence of understanding of principles of health literacy and plain language (format, font, visuals, color, text construction, depth, detail, complexity).

iv. In terms of Utility

- **Lesson Implementation /Preparation (for educators)**

  It includes all the materials and information needed for implementing the lesson, acquiring support materials, and preparing for the class (including guidelines for lessons).

- **References**

  It includes appropriate credit for all non-original material, references, and additional resources and information.

- **Instructions**

  All instructions are easy to understand and follow.

- **Validity of program**

  The curriculum has established strong validity and reliability - has been peer-reviewed, pilot tested and refined.

- **Activities**

  Any activities used to reinforce the educational messages are practical to implement.

- **Relevant resources**

  All relevant resources, such as audiovisuals or websites, are included with the curriculum.

- **Source Citation**

  Source, author, and publication date are clearly and appropriately cited.

- **Logic Model**

  It includes a complete logic model or other appropriate programming planning and outcomes model

- **Process of implementation**

  Describes recommended process for implementing the curriculum

v. In terms of Evaluation

- **Audience tested Instruments**

  Includes assessment instruments (e.g. checklists, questionnaires, observational instruments) that have been audience- tested.

- **Psychometrically Sound Instruments**

  It includes assessment instruments (e.g. checklists, questionnaires, observational instruments) that demonstrate acceptable psychometric properties.
- **Link to Learning Objectives**

  It includes that evaluation methods and items are clearly linked to learning objectives.
- **Evaluation Phases**

  Assessment instruments include those designed to be administered prior to, during, and after implementing the curriculum so that effectiveness can be established and reported.

Curriculum Implementation Tools

i. Manuals

This Manual has been constructed around a framework of concepts and trends that characterize contemporary curriculum development. The resources contained in this pack seek to develop conceptual understandings about curriculum development and an appreciation of the nature, philosophy and principles of curriculum change as a dynamic and on-going process. It could be useful in producing a paradigm shift in approaching the various dimensions of curriculum change in a way that highlights their inter-relatedness.

- Concepts of quality and relevance in education and their implications for curriculum change.
- Curriculum change as a complex and dynamic process involving a range of stakeholders in the development of a series of products
- The implications of emerging trends in curriculum change for:
    - ❖ policy making
    - ❖ curriculum design, including the structure of curriculum frameworks and subject syllabuses
    - ❖ time and space allocation
    - ❖ education system governance and management, including resource management
    - ❖ textbook development
    - ❖ assessment and evaluation

- ❖ teacher training and professional development
- Processes of curriculum implementation and evaluation

The manual can be used in the workplace by employers and supervisors for preparing and training employees as well as dealing with learning gaps of staff. Community agencies can also use the manual to enhance services to support their students.

ii. Textbooks / Teaching-Learning Materials

This text books explores current trends in policy and processes of textbook development and presents a variety of models for the curriculum professional to consider. The potential roles of various stakeholders, including the Ministry of Education, in the production and distribution of textbooks are presented and users are invited to consider the schemes that best apply to their contexts. The full range of teaching-learning materials is also explored, and some ideas for the selection and production are given in relation to curriculum needs.

iii. Module

A module is a well structured or self-contained learning unit which is complete with specific objectives, contents, teaching / learning strategies and some forms of assessment. This module offers opportunities for curriculum professionals to develop their understanding of central issues related to capacity building for curriculum implementation by exploring:

- Approaches to encouraging discourse about curriculum philosophy, concepts, change and the implications for education systems;
- Strategies for promoting new approaches to teaching and learning, information and communications technology;
- Issues in school based training and teacher education;
- Whole school issues.

This module is organized around three activities:

- *Approaches to capacity building* -Discusses needs for training in a framework of continuous capacity building
- *Capacity building of curriculum professionals as a requisite for reform* - Analyzes the needs for technical training of curriculum specialists

- *Teacher involvement in capacity building* - Helps in revising the different attitudes that can enable or block the capacity building processes

6.10 CURRICULUM IMPLEMENTATION

NCERT mandate is to provide professional assistance in policy formulation and implementation in respect of school education. It has gained acceptability through its professionalism and field level expertise developed last four decades. This became possible through regular intensive interaction at the grass root level with the practicing teachers everywhere in the country. The majority of the teachers work in difficult and deficient situations. NCERT, through studies, surveys researches, multifarious programmes and motivational initiatives has contributed effectively in major Central and state level programmes aimed at improvement of school education in its various aspects. Educational functionaries at various levels have joined hands with NCERT and collaborated and cooperated in its endeavors. It is with their help and assistance that the NCERT developed the first curriculum framework. "The curriculum for the 10 year school - A Framework in 1975" is response to National policy in Education 1968. The next National curriculum framework "National Curriculum for Elementary and Secondary Education - A framework" was developed in 1968 in response to the national policy on Education, 1986. On both the occasions these professional documents were prepared in consultation with practitioners, experts, individuals, institutions and other within the framework of national policy on education 1968 and 1986 respectively.

Curriculum Implementation Team

Curriculum implementation requires beginning with a clear plan and an educational strategy. A well thought out long- term plan that addresses the needs of a diverse population is the start of successful implementation of a curriculum. One of the best ways to begin mapping out curriculum implementation is to determine the most effective means of communication between all stakeholders. Communication needs to be clear and concise along with a consistent mode of two-way, back and forth talk. Every member of the team must know what's expected of them and what their job will be in

implementing the new curriculum. The following are the most important aspects to require of teams that are in charge of curriculum implementation:

- Clear goals
- Resource Management
- Professional Development
- Community

When doing research for a research paper on curriculum implementation, a plan for professional development needs to be in place along with the curriculum. Part of establishing a new curriculum is the understanding that every professional involved must be dedicated to development of standards and practices that meet the needs of teachers, specialists, administrators, and all involved with the educational goals of the institution. In order for professionals to succeed in the educational setting, edification and satisfaction of identifying, developing and implementing support for leaders must be part of the plan.

In order to lead team for curriculum implementation leader must have a vision and a long-term plan that outlines expectations, resources, professional development and how to work with communities and families. The leader must have a vision of what successful curriculums entail and how to choose a team that can help share the responsibility of communicating a plan implementing a plan, supporting, monitoring, and then evaluating the curriculum. In designing the long-term plan several things must be kept in mind. The goal of the school or school district must be accounted for; standards and guidelines according to state and local regulation must be known; and the foresight to predict change that may happen in standards and government regulations are all part of the leader's job in curriculum implementation. Having a strategy and developing that strategy to foster leaders throughout the community should also a sound part of curriculum implementation.

Often times in curriculum development one of the most important aspects of the educational experience is forgotten. Including communities and family in curriculum implementation and design is essential for understanding a holistic approach to educational needs in India. Often times the community and families of students feel left out of the educational planning process.

Implementing the community and families into curriculum development makes them feel included and a part of the educational process within their world. Everyone is necessary in order to develop a successful curriculum. Teachers, policy makers, principles, families, caregivers, and parents are all seeking the common goal of educating children to be better community members and build a better world. Curriculum implementation requires including everyone in the planning process of what our children need to learn in order to make them successful.

Check Your Progress 3

Notes: a. Write your answers in the space given below.
b. Compare your answers with those given at the end of this unit.

1. What are the components should be possessed in the tool of assessment of curriculum?
   ……
   ……
   ……
2. What are the implications of emerging trends in curriculum change for?
   ……
   ……
   ……
3. What are the curriculum implementation tools?
   ……
   ……
   ……
4. What are the most important aspects to require of teams that are in charge of curriculum implementation?
   ……
   ……
   ……

6.11 ROLE OF UNESCO IN CURRICULUM IMPLEMENTATION

After the two global wars, it was seriously thought by eminent leaders of the world that the dire need of the time was to develop goodwill and co-operation between different nations and regions of the world. Till then discord, differences and disbelief among different nations will not be removed and this will explode into wards every now and then. To establish peace in the world, an international organization was established. This goes by the name as United Nations

Organization. As a subsidiary body of this U.N.O. another organization was also established to promote goodwill among the various nations of the world. As a matter for fact the credit for this organization: United Nations Educational, Scientific and Cultural Organization (UNESCO), goes to scientists, artists, thinkers and educationists of about three dozen counties who thought that international goodwill and co-operation could not be achieved by mere political and economic treaties, plans and such other programmes. They were of opinion that the problem of war was less political than psychological. Hence to solve this problems, some other porogrammes were essential than mere political treaties and economic alliances. The need is of social, cultural and educational programmes which being different countries together and promote understanding and appreciation of another's ideals, values and behavior patterns. Such programmes should be of cultural, artistic, literary and scientific nature. UNESCO plans and executes these programmes with the help of member nations. Let us study its purpose and mode of working.

Preamble of UNESCO

Since wars begin in the minds of men it is in the minds of men that the defense of peace must be constructed, the wide diffusion of culture and the education of humanity for justice and peace are indispensable to the dignity of man and constitute a sacred dirty…. a peace, based exclusively upon the political and economic arrangements of governments would not be a peace which could secure the unanimous lasting and sincere support of the people of the world and it must, therefore, he founded, if it is not to fail, upon the intellectual and moral solidarity of mankind.

The above preamble of UNESCO clearly assert that if a stable peace is to be established in the world, then all nations must rise above differences and co-operate in the fields of art, science, culture and education to the development by the efforts of all. Thinkers, scientists, artists and educationists of different nations of the world should come together from time to time and devise plans for such worldwide co-operation and help.

Aim of UNESCO

The main aim of UNESCO (United Nations of Educational Scientific and Cultural Organization) is to promote international good will through education to establish a lasting world peace. It organizes such programmes of education,

in different countries and regions, which educate the minds of people psychologically and intellectually so that, they form strong attitudes against conflict and was and promote international amity and brotherhood.

Functions of UNESCO

To achieve its aim UNESCO is doing to the following activities.

- It tries to remove fear and disbelief in the national by promoting fellow-feeling and goodwill among them.
- It tries to remove illiteracy and ignorance from the back-ward nations of the world.
- It brings culture art, science and literature of one country within the reach of other countries for the benefit of both and all others.
- It gives financial aid to research scholars to promote research work as far as possible.
- It carries out teachers, scientists and thinkers to exchanges programmes among various counties so that they are able to discuss individual and common problems and devise solutions for them.
- It gives financial aid for opening schools in poor and backward areas of world counties.
- It devises nations about scrutiny and preparation of books, reorganization of curriculum and promoting translation of higher standard books for the use of those who need these translations.
- It organizes exhibitions of periodicals, magazines, books and art creations on an international scale, the purpose being to promote international understanding.
- It encourages international tours of students to stimulate goodwill and fellow feeling among students of different nationals.
- It tries to propagate the ideals of fellow feeling and brother-hood among the different nations of the world through T.V., press, wireless and other published materials.

In-Service Education of Teachers

A prospective teacher is always prepared to learn more. The professional growth of a teacher does not cease when he leaves the training institution. In fact he begins to learn from different kinds of experiences. Rabindranath

Tagore has rightly remarked “A teacher can never truly teach, unless he is still learning himself. A lamp can never light another lamp unless it continues to burn its own flames. “Idea is amply clear that new experiences of teaching should be gained at every walk of life and from every new score. It must be realized that experience needs to be supplemented by experiment before reaching its fullness. Therefore, in order to alive and fresh the teacher should become all learner from time to time constant our pouring needs constant in talking.

Meaning of In-Service Teacher Education

The term is self explanatory. It refers to the education a teacher receives after he has entered the teaching profession.The teacher might have received his professional education in a teaching institute or in a college of education but he continues his education and should possess three types of competencies as under:

- Competency in academic field
- Competency in teaching methodology
- Competency in class-room interaction analysis and application.

Objectives of in-service training programme

Followings are objectives in-service training programme:

- To equip the teachers with the latest content or subject matter in their specialized fields.
- To initiate the teachers in the habit of self-study with ultimate aim of keeping them abreast of the latest development in their own and allied field.
- To help the teachers learn economical and effective methods of teaching
- To develop suitable varied programmers to meet individual needs, school needs and the needs of the state with regard to educational extension.
- To follow up the teachers who undergo in-service education to reinforce the objective of the training.

Programme of In-Service Teacher Education

Generally, the programmes of in-service education in our country are organized by the colleges of teacher education, SCERT, DIET, and NCERT. Now the time has come when this programme as a follow up measures can be initiated even at the individual school level and school complex level.

- Seminar
- Symposium
- Workshop
- Discussion
- Refresher course
- Study groups
- School programmes
- Study of professional writing
- Conferences

Few important agencies of in-service Education

- State Department of Education
- University Grants Commission
- State institute of Education
- Departments of State Universities
- Central and State Institute For Languages
- Teacher's Organizations

Teacher is the dynamic force of the educational system. Education without a teacher is just like a body without soul, skeleton without flesh and blood, a shadow without substance. There is no greater need for the cause of education today than the need for the strong mainly men and women as teaches for the young". As social engineers, the teachers can socialize and humanize the young by their man- like qualities. The teacher is the yardstick that measures the achievement and aspirations of the nation the worth and potentialities of a country get evaluated. In and through the work of the teacher, "the people of a country are the enlarged replica of their teachers". They are the real nation builder.

Role of Teacher in Curriculum Implementation

The process of education is a triangular process in which there are three points – the educator, the pupil and the subject of education. In order to be able to teach the educator must establish some relationship with the learner, based on his knowledge of the latter. For this relationship to be meaningful it is essential that the educator himself should be conversant both with the subject he is teaching and the psychology of the learner. Education aims at teaching the learner the providing him with some information. Teaching assists the learner in his continuous adaptation to his environment and helps to make him active. Through education, training of the emotions is accompanied by an inspiration to learn. Briefly, then, teaching is intended to prepare the pupil for future life.

i. Principle of Activity

Programmatic thinkers lay particular emphasis upon the principle of activity, for they believe it to be the most important factor in learning. In the words of Wm. Ryburn, "One of the most important facts about children, which we have to remember throughout our teaching work, is that children are naturally active….. Thus our first general principle of teaching method is the principle of activity." Most of the recently evolved teaching methods, such as the project method, method of basic education, Dalton Plan, Montessori and Kindergarten methods are based on the principle of leaning by doing. The process of learning is an active process, and nothing can be rally learnt by inactively listening or looking on as a mere spectator. Hence, in the school, the child should be given every chance to be active this also has another advantage. When the child is active physically, his mind is also more active than otherwise and hence he acquires thinking more easily. Knowledge increases only when it is used. In the words of Comenius, "What has to be done must be learned by practice". All kinds of artistic skill, such as dancing sculpture, music, painting, etc., are all learned through actual practice.

ii. Principle of Motivation

Educational psychology has made educators aware of the fact that motivation is the most significant factor in the process of learning. In the absence of motivation, the educator cannot elicit any useful response from his pupil. There is a lot of wisdom in the proverb that you can take the horse to

water but you can't make it during. In much the same way, the pupil learns something only when motivated to learn it, because it is motivation alone that can awaken interest in him. Once interest has been aroused in a particular direction, the learner is motivated to learn it. Creation of a strong motive for learning is more than half the educator's task. If this motivation is absent the educator can try his best, but it will be remarkable if he drives anything is not his pupil's head. Motivation for learning can also be induced by making use of such tendencies in the child as dedicating himself, assertiveness, conflict, competition, etc.

iii. Principle of Linking with Life

Dewey, the famous educationist, expresses the opinion that education and life are two aspects of the same fact. In tribal societies, the processes of living and education are not separated but as social structures become more complex, the process of education tends to be separated from life. At times, it can move so far away from life that whatever happened inside the school seems to bear no relation to the life outside the school. That is why educationists keep on reminding people that life inside the school must keep in contact with life outside it, for education to relation any meaning. Hence, one of the important principles of education is that it must have relations link with life. All that is taught to the child can remain in this mind only if it establishes some satisfaction with all that he has learnt before the teaching of arithmetic, for example, can be made more meaningful if it is linked to the child's everyday activities outside the school.

iv. Principle of Interest

Another important principle underlying teaching is the principle of interest. Educational psychology tells the educator that he cannot make his teaching effective unless he arouses the pupil's interest in the subject being taught. Hence, the educator must begin his task by arousing this interest, because this will create the necessary inspiration in the child. He will be willing to learn and thus facilitate the teacher's work. There are certain disciplines which naturally interest the learner, but where there is a question of choice among alternatives, as far as possible, attention must be paid into the learner's own inclinations and interest.

v. Principles of Selection

The principle of selection also plays a significant part in the teaching process. The successful teacher always determines before handle the subject that he wishes to teach a particular class the extent to which he would prefer to teacher and the method he would like to adopt. Hence, the technique of teaching and the limits up to which a general subject like geography, history, civics, agriculture, painting, language, or mathematics, etc., is to be taught are determined well in advance. The rules governing this selection are determined by the educator's own judgment and understanding of his pupil's psychology. And, the greater his knowledge of psychology, the better will be his selection.

vi. Principle of Definite Aim

Just as education in general must have an aim each different lesson taught to the pupil should also have its distinct objective. This helps to achieve clarity and precision in teaching and also focuses the learner's attention. It is the objective of the lesson which determines the technique of teaching. The learners should also be aware of this aim of education so that they tend to ignore many of the important aspects of the lesson, because they fail to attaché due importance to each part. Hence, in order to give a definite and clear form of teaching, it must also be given an aim.

Role of School in Curriculum Implementation

In the following lines we are throwing light on the importance of school.

i. Extensive Cultural Heritage: In modern times knowledge has become so vast varied cultural heritage so extensive that informal agencies like the family and the community are quite incapable to shoulder to responsibility of transmitting this huge treasure of knowledge to the rising generation. School is the only formal agency to complete this task.

ii. Connecting Line between Home and the World: The family develops in the child various qualities and values namely love, sympathy, sacrifice, cooperation, tolerance and service, but all these qualities remain connected with the members of the family and its four walls. This makes the child narrow-minded. School is a connecting link between the family and the external world. In School the child comes in contact with children belonging to different families. This contact widens his outlook with the result that the

child becomes capable enough to face the challenges and multifarious problems of life and the wider society outside.

iii. Provision of a Special environment: Information agencies do not impart education according to a pre – planned scheme. Hence, the effect of such indefinite environment affects adversely upon the growth and development of the child. On the other hand, school provides a simple, pure, interesting and well – organized environment before the child according to a pre-planned scheme with ensures the physical, mental, emotional and social development of the child in a natural way. Hence, school is an important agency of educational activities.

iv. Harmonious development of personality: The families, of education are also indefinite. Sometimes the vagueness of activities affects the personality of the child adversely and develops in him undesirable habits and attitudes. On the contrary, the aims and activities of school are pre-planned. This ensures the harmonious development of the child. Hence, the importance of school cannot be underestimated.

v. Development of Cultural Pluralism: In school, children belonging to different religions, castes, creeds and social hierarchy come together and mix up freely with each other in friendly atmosphere with the result that they develop sympathy, co-operation, tolerance and respect for the views and cultures of others in a natural way. It is why School is an important agency to develop cultural pluralism amongst children.

vi. Propagation of Ideals and ideologies of state: School is an important agency for the propagation of ideals and ideologies of each state in the shortest possible time. It is why all the democratic, autocratic and communist states have assigned due importance to school today.

vii. Perpetuation and Development of Society: Society review and develops itself thought the active cooperation of school. All social problems and needs of society are flashed in one way or the other in school which provides the desired solutions for all the problems of society. In this way, social progress goes on and on with the help of school.

viii. Encouragement of Corporate Life: Individual life needs socialization. The child should be encouraged to be more and more social in his outlook and behaviour. Schools provide these experiences for the child to understand

social behaviour and develop in him a sense of social responsibility and corporate life.

ix. Creation of educated citizens: In democracy, school has a special importance. Children learn their rights and duties and develop love, affection sympathy, co-operation, tolerance and responsibility in school. With the development of these socially desirable values they prove useful citizens when they become adults.

School as Better Place of Education than Home: Under the influence of group life in school a child learns many social qualities and courtesies. Since the physical surroundings of school is healthy, there is ample provision for games, sports and various kinds of cultural activities. A family cannot provide all these facilities. Hence, school is a better place than home for the socialization and culturalization of the child.

x. Co-operation of Different Agencies: School is the only agency through which cooperation of different agencies namely the family, the community and the state may be successfully achieved. It is why all these agencies try to extend their full co-operation in all the activities of school. Without the active co-operation of these agencies school cannot achieve its objectives.

More precisely society has created a number of specified institutions to carry these functions of education. These institutions are known as agencies of education. Sources through which the child directly or indirectly receives education – formal and informal are called agencies of education. Agencies of education are the gateway through which the objective of education is realized.

Check Your Progress 4

Notes: a. Write your answers in the space given below.
b. Compare your answers with those given at the end of this unit.

1. What are the major functions of UNESCO?
   ……
   ……
   ……
2. Write any three main objectives of in-service teacher programmes.
   .....
   .....
   .....

6.12 LET US SUM UP

The basic concerns of education is to enable children to make sense of life and develop their potential, to define and pursue a purpose and recognize the right of others to do the same-stand uncontested and valid even today. If anything, we need to reiterate the mutual interdependence of humans, and, as Tagore says, we achieve our greatest happiness when we realise ourselves through others. Equally, we need to reaffirm our commitment to the concept of equality, within the landscape of cultural and socio-economic diversity from which children enter into the portals of the school. Individual aspirations in a competitive economy tend to reduce education to being an instrument of material success. The perception, which places the individual in exclusively competitive relationships, puts unreasonable stress on children, and thus distorts values. It also makes learning from each other a matter of little consequence. Education must be able to promote values that foster peace, humaneness and tolerance in a multicultural society. This document seeks to provide a framework within which teachers and schools can choose and plan experiences that they think children should have. In order to realize educational objectives, the curriculum should be conceptualized as a structure that articulates required experiences. To strengthen our cultural heritage and national identity, the curriculum should enable the younger generation to reinterpret and re-evaluate the past with reference to new priorities and emerging outlooks of a changing societal context. Understanding human evolution should make it clear that the existence of distinctness in our country is a tribute to the special spirit of our country, which allowed it to flourish. The cultural diversity of this land should continue to be treasured as our special attribute. In spite of the recommendations of the NPE, 1986 to identify competencies and values to be nurtured at different stages, school education came to be driven more and more by high-stake examinations based on information-loaded textbooks. Despite the review of the Curriculum Framework in 2000, the vexed issues of curriculum load and the tyranny of examinations remained unresolved. The National System of Education will be based on a national curricular framework, which contains a common core along with other components that are flexible. The dimensions of the national framework for school curriculum that have been outlined in the preceding

chapters are derived from related aims of education with a social conscience, focusing on learners who are actively engaged with constructing rather than only receiving knowledge through their individual and collective endeavors. Such a curricular vision needs to be supported and sustained with systemic reforms of structures and institutions that nurture practices supportive of children's inclusion in school and their learning.

6.13 UNIT END ACTIVITIES

1. Compare and contrast the functions of NCERT and SCERT
2. Collect the manuals and teachers' handbooks and present your view.

6.14 POINTS FOR DISCUSSION

1. Explain the concept of agencies of Evaluation.
2. Explain the role and functions of apex bodies in Higher Education.
3. Explain the role of teachers, administrators and schools in successful curriculum implementation.
4. What are the roles of different tools of curriculum implementation? How can they be implemented effectively?
5. Explain the need and importance of in-service training programmes.

6.15 ANSWERS TO CHECK YOUR PROGRESS

Check Your Progress 1

1. The following are broad classifications of Agencies of Education:

- Formal Agencies
- Non Informal Agencies

2. Non-formal education is the real hope to minimize the gap between both formal and informal and make balance between both. In order to give and provide liberal, flexible, standard, cheap and qualitative education as per the need of an individual, society and the country, non-formal education is the best way.

3. The following are the main features stressed by National Policy on Education

- Consolidation and Expansion of Institutions
- Development of Autonomous Colleges and Departments

- Redesigning Courses
- Training of Teachers
- Strengthening Research
- Improvements in Efficiency
- Creation of structures for co-ordination at the State and National levels
- Mobility

Check Your Progress 2

1. UGC has spelt out the following guidelines.
    - Well established teaching departments in university to start as per the same standards.
    - High priority for setting up study centre in area where there is concentration of students.
    - Provision of contact programmes.
    - Grant should be earmarked for such programmes are contact programmes, study centers, writing of lessons core staff, library facilities.
    - Correspondence courses at P.G, level should be started only by universities with the experience at the undergraduate level. U.G.C,
2. The following are the functions of NCTE:
    - Preparing a guideline with regard to minimum qualifications for the candidates to be employed as teacher-educators at different levels
    - Developing norms for any specified category of courses or training in teacher – education, including minimum eligibility criterion for admission
    - Developing a guideline for general teacher-education programme
    - Promoting innovations and research studies and organize them periodically or annually
    - Preparing a programme for in-service teacher education for orienting teachers for latest development
3. The following are the major functions of *NCERT:*
    - To promote and coordinate educational Research
    - To provide extensive service
    - To organize pre-service and in-service training

- To disseminate information on the latest educational technique and practices
- To sponsor organize survey of national importance
- To emphasize the investigations of immediate problems in Indian education

4. The following are the main functions of SCERT:

- In-service training,
- Extension activity
- Training
- Research and
- Publication

Check Your Progress 3

1. Tool of Assessment of curriculum should possess the following components:

- Content
- Audience/ target group
- Readability
- Utility
- Evaluation

2. The implications of emerging trends in curriculum change for:

- policy making;
- curriculum design, including the structure of curriculum frameworks and subject syllabuses;
- time and space allocation;
- education system governance and management, including resource management;
- textbook development;
- assessment and evaluation
- teacher training and professional development

3. The following are the curriculum implementation tools:

- Manuals
- Textbooks
- Module

4. The following are the most important aspects to require of teams that are in charge of curriculum implementation:

- Clear goals
- Resource Management
- Professional Development
- Community

Check Your Progress 4

1. The following are the major functions of UNESCO:

- It tries to remove illiteracy and ignorance from the back-ward nations of the world.
- It brings culture art, science and literature of one country within the reach of other countries for the benefit of both and all others.
- It gives financial aid to research scholars to promote research work as far as possible.
- It gives financial aid for opening schools in poor and backward areas of world counties.
- It devises nations about scrutiny and preparation of books, reorganization of curriculum and promoting translation of higher standard books for the use of those who need these translations.
- It organizes exhibitions of periodicals, magazines, books and art creations on an international scale, the purpose being to promote international understanding.
- It encourages international tours of students to stimulate goodwill and fellow feeling among students of different nationals.

2. The following are the main objectives of in-service teacher programme:

- To equip the teachers with the latest content or subject matter in their specialized fields.
- To initiate the teachers in the habit of self-study with ultimate aim of keeping them abreast of the latest development in their own and allied field.
- To help the teachers learn economical and effective methods of teaching

UNIT VII CURRICULUM EVALUATION

Structure

7.1 INTRODUCTION

In the context of education 'Evaluation is the collection of, analysis and interpretation of information about any aspect of a programme of education or training as part of a recognized process of judging its effectiveness, its efficiency and any other outcomes it may have'. Evaluation in curriculum construction essentially is the provision of information for the sake of facilitating decision 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 criteria, collection and analysis of data. It includes in obtaining information for use in

judging the worth of a programme and procedure. It is a comprehensive term and transcends standardized tests covering all means of ascertaining the results of construction.

Evaluation may be defined as “a broad and continuous effort to inquire into the effects of utilizing educational content and process according to clear defined goals” Worthen and Sundars (1973) defined evaluation as “the determination of the worth of the curriculum (or portion of the curriculum). It includes gathering information for use in judging the worth of the curriculum programme, or curriculum materials”. There are different models of evaluation to evaluate the curriculum construction in appropriate to the level, content and other aspects of education and its output. In this unit, we will discuss about the need of curriculum evaluation and different models of curriculum evaluation. Also, the issues in evaluating curriculum along with the output of evaluation can be seen elaborately.

7.2 OBJECTIVES

After going through this unit, you will be able to:

- acquire knowledge of the terms and concepts of curriculum evaluation
- understand the approaches of curriculum evaluation
- acquaint the criteria for curriculum evaluation
- comprehend different curriculum models
- understand the different issues in curriculum evaluation

7.3 CURRICULUM EVALUATION

Evaluation

Evaluation is the process of determining the value of something or the extent to which goals are being achieved. It is a process of making a decision or reading a conclusion. It involves decision making about student performance based on information obtained from an assessment process. Assessment is the process of collecting information by reviewing the product of student work, interviewing, observing, and testing.

Evaluation is the process of using information that is collected through assessment. The ultimate purpose of any evaluation process that takes place in schools is to improve student's learning (Howell and Nolet, 2000) .Evaluation entails a reasoning process that is based on influence. Inference is the process of arriving at a logical conclusion from a body of evidence. Inference usually refers to the process of developing a conclusion of the basis of some phenomenon that is not experienced or observed directly by the person drawing the inference. Evaluation is a thoughtful process. We use it to help us understand things. Evaluation has been defined in a variety of ways, all of which have at their core the idea of comparisons between things, note the differences, summarize our findings, and draw conclusion about result. (Deno, Winkin, Yavorsky, 1977). Evaluation is the judgment we make about the assessment of student learning based on established criteria. It involves a process of integrating assessment information to make inferences and judgment about how well students have achieve curriculum expectations. Evaluation involves placing a value on and determine the worth of student assessment. Evaluation is usually made so that process can be communicated to students and parents effectively. Evaluation provides the following information;

- Directly to the learner for guidance
- Directly to the teacher for orientation of the next instruction activity
- Directly to external agency for their assessment of schools functioning in the light of national purposes

Curriculum Evaluation

Curriculum Evaluation is the process of obtaining information for judging the worth of an educational program, product, procedure educational objectives or the potential utility of alternative approaches designed to attain specified objectives (Glass and Worthem, 1997). Curriculum evaluation focuses on determine whether the curriculum as recorded in the master plan has been carried out in the classroom in evaluation a curriculum, the following key question are usually asked in curriculum evaluation basically:

- Are the objectives being addressed?
- Are the contents presented in the recommended sequence?
- Are students being involved in the suggested instructional experience?
- Are students reacting to the contents?

According to Gatawa (1990: 50), the term curriculum evaluation has three major meanings:

- The process of describing and judging an educational programme or subject
- The process of comparing a student's performance with behaviourally stated objectives
- The process of defining, obtaining and using relevant information for decision-making purposes

7.3.1 Objectives Curriculum Evaluation

Evaluation of curriculum is an integral and essential part the whole process of curriculum development. It is a continuous activity and not a 'tail-end-experience'. Evaluation and planning are complementary process which occurs 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 importance of curriculum evaluation is to determine the value of the curriculum itself is the appropriate for the particular group of students with whom it is being used. The objectives of curriculum evaluation are then stated as:

- To determine the outcomes of programme
- To help in deciding whether to accept or reject a programme
- To ascertain the need for revision of the course content
- To help in future development of the curriculum material for continuous improvement
- To improve methods of teaching and instructional techniques

7.3.2. Purposes of Evaluation

The purpose of an evaluation is to determine the value of something. Most evaluation experts contend that the main reason of evaluating a curriculum is to provide information for making decisions about either individuals or the curriculum.

i. Decision about Individuals: If the evaluation is about individuals or learners, the following are the purposes are to be considered:

a. Diagnostic: means that those who must make diagnostic decisions require information about strengths and weaknesses and determination of areas that need special instructional attention.

b. Instructional Feedback: means that the decision concern adjustments students might need to make in their approaches to studying a subject based on their knowledge of the progress they are making.

c. Placement: means that the information about the level of proficiency of the students in particular skills in order to place them in group that are relatively homogeneous.

d. Promotion: means that the decision about promotion is based on information about the proficiency and maturity of students in order to decide whether or not to promote to the next grade level

e. Credentialing: means that it has to do with certification, licensure and otherwise attesting to the competence of a programme graduate. This decision requires attaining a predetermined passing level on a test designed by the credentialing body, typically the state or professional organization.

f. Selection: means that it is made by college admission offices, typically use existing data about student achievement (Grades), but this may also depend on standardized test.

ii. Decision about the Curriculum

Curriculum evaluation decisions are of following types of evaluation:

a. Formative Evaluation

Formative evaluation occurs during the course of curriculum development. Its purpose is to contribute to the improvement of the educational programme. The merits of the programmes 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 programmes.

b. Summative Evaluation

In summative evaluation, the final efforts 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. This type of Evaluation plays as summative role when it enables administrators to decide whether or not a curriculum is good enough to warrant institutional support. Decision on whether a school system should formally adopt a curriculum, or whether an external funding agency should continue to support a curriculum

c. Diagnostic evaluation

Diagnostic Evaluation is directed towards two purposes either for placement of students properly at the outset of an instructional level of to discover the underlying cause of deviancies in student learning in any field of study.

7.3.3 Perspectives on Curriculum Evaluation

There are the perspectives in curriculum evaluation. They are:

i. Traditional perspective

In this, the evaluation question is sought to measure whether the students have acquired the information, mastered the basic skills and internalized the accepted values. In this perspective, the evaluation is aimed at determining whether the accepted facts, skill and value have been effectively transmitted.

ii. Experimental Perspective

In this, the evaluation question is sought to measure the broad range of both short and long term effects of experimental programs on students and the intrinsic quality of experiences students have. In this perspective, the evaluation is aimed at determining the effectiveness of the programmes and the quality of the experiences.

iii. Behvioural Perspective

In this, the evaluation question is sought to measure whether students have acquired the behaviors that the curriculum targeted. It can be assessed using Criterion referenced measures of student performance and these measures assess achievement in terms of absolute standards.

iv. Structure of Discipline

In this, the evaluation question is sought to measure whether students gain insight into the conceptual structure of the discipline and whether students

engage in real inquiry. In this perspective, the evaluation is aimed in congruence of the curriculum with real inquiry in the disciplines.

v. Constructivist Perspectives

In this, the evaluation question is sought to measure whether students acquire basic concepts meaningfully and learn to solve non-routine problems. In this perspective, the evaluation is aimed at determining what and how the individual think and understands.

Check Your Progress 1

Notes: a. Write your answers in the space given below.
b. Compare your answers with those given at the end of this unit.

1. What is the information provided by Curriculum Evaluation?
   .....
   .....
   .....
2. Enlist the Objectives of Curriculum Evaluation.
   .....
   .....
   .....
3. What are the perspectives Curriculum Evaluation?
   .....
   .....
   .....

7.4 CRITERIA FOR CURRICULUM EVALUATION

There are four major criteria for assessing the workability of the curriculum.

i. Subject: In the curriculum various subjects are included such as - Hindi, English, mathematics, Physical Sciences, Biological sciences, History, Home science, Psychology, Sociology, Physical Education, Art and Drawing etc. The structure of content of these subjects is determined for the curriculum development.

ii. Experiences: the curriculum provides the following type of experiences to the students, social, historical, geographical (time and place sense) physical, political, civic senses, religious, spiritual and reactive experiences, expression of ideas facts and events.

iii. Skills: Some curriculum provides the situations for developing skills or psychomotor activities- languages reading writing, speaking, observation, perception use of different type instrument in the workshops and field works

communication skills, craft-work, verbal and non-verbal communication skills. It is related to psychomotor objectives.

iv. Attitude and Values: The types of curriculum for provide the experiences for developing affective domain of the learners. The feeling, belief attitudes and values are developed. It develops self confidence, honesty, sensitivity, sincerity, morality, objectivity, character and adjustment.

7.5 CURRICULUM EVALUATION PLAN

The fundamental concerns of curriculum evaluation relate to:

- Effectiveness and efficiency of translating government education policy into educational practice;
- Status of curriculum contents and practices in the contexts of global, national and local concerns;
- The achievement of the goals and aims of educational programmes

Curriculum evaluation aims to examine the impact of implemented curriculum on student (learning) achievement so that the official curriculum can be revised if necessary and to review teaching and learning processes in the classroom. Curriculum evaluation establishes:

- Specific strengths and weaknesses of a curriculum and its implementation
- Critical information for strategic changes and policy decisions
- Inputs needed for improved learning and teaching
- Indicators for monitoring

Curriculum evaluation may be an internal activity and process conducted by the various units within the education system for their own respective purposes. Curriculum evaluation may also be external or commissioned review processes. These may be undertaken regularly by special committees or task forces on the curriculum, or they may be research-based studies on the state and effectiveness of various aspects of the curriculum and its implementation. These processes might examine the effectiveness of curriculum content, existing pedagogies and instructional approaches, teacher training and textbooks and instructional materials. The ultimate goal of curriculum evaluation is to ensure that the curriculum is effective in promoting

improved quality of student learning. Fulfilling the diverse objectives of diagnosis, certification and accountability requires different kinds of assessment instruments and strategies selected to achieve specific purposes.

If the curriculum for a particular grade is not revised for a long time, it would become obsolete, recent developments in the field will not find a place in it; it will not be effective and efficient. In order to develop an efficient and effective curriculum we should evaluate the existing curriculum and modify it to make it more relevant. Thus the need for evaluating a curriculum emerges from the field. In any content area there would be developments taking place periodically and if the current changes are not incorporated, the students would be unable to know the reality. In order to incorporate recent developments and to fit them into the structure of the course one requires analyzing curriculum systematically. There could be some concepts and practices in a curriculum, which become outdated over time and are no longer in practice in the field.

To improve the efficiency of curriculum one has to analyze the outputs and inputs of the educational system and make the necessary modifications as revealed by the analysis can be accomplished by carrying out a curriculum evaluation. There could be differences between intended curriculum and the operational curriculum. Intended curriculum refers to the prescriptions in the curriculum document including operational and evaluation procedures of a course. The operational curriculum refers to actual processes in a classroom though which the intended curriculum is transacted. There could be differences between what is intended and what is implemented.

7.6 CURRICULUM EVALUATION MODELS

7.6.1 Tyler's Evaluation Model

Tyler's goal attainment model or sometimes called the objectives-centered model is the basis for most common models in curriculum design, development and evaluation. The Tyler model is comprised of four major parts. These are:

- defining objectives of the learning experience
- identifying learning activities for meeting the defined objectives

- organizing the learning activities for attaining the defined objectives
- evaluating and assessing the learning experiences

The Tyler Model begins by defining the objectives of the learning experience. These objectives must have relevancy to the field of study and to the overall curriculum (Keating, 2006). Tyler's model obtains the curriculum objectives from three sources:

- the student
- the society
- the subject matter

The objective oriented approach was developed in 1930s and was credited with the works of Ralph Tyler. Tyler regarded evaluation as the process of determining the extent to which the objectives of a project are actually attained. He proposed that for one to evaluate a project he/ she must:

- Establish broad goals or objectives of that project
- Classify the goals or the objectives
- Define those objectives in measurable terms
- Find situations in which achievement of objectives can be shown
- Develop or select measurement techniques
- Collect performance data
- Compare performance data with measurable terms stated

When defining the objectives of a learning experience Tyler gives emphasis on the input of students, the community and the subject content. Tyler believes that curriculum objectives that do not address the needs and interests of students, the community and the subject matter will not be the best curriculum. The second part of the Tyler's model involves the identification of learning activities that will allow students to meet the defined objectives. To emphasis the importance of identifying learning activities that meets defined objectives, Tyler states that "the important thing is for students to discover content that is useful and meaningful to them" (Meek, 1993, p. 83). In a way Tyler is a strong supporter of the student-centered approach to learning. Overall, Tyler's model is designed to measure the degree to which pre-defined objectives and goals have been attained. In addition, the model focuses primarily on the product rather than the process for achieving the goals and objectives of the

curriculum. Therefore, Tyler's model is product focused. It evaluates the degree to which the pre-defined goals and objectives have been attained

There are several criticisms leveled at the Tyler's goal attainment model or the Tyler's objective centered model. The first criticism is that, it is difficult and time consuming to construct behavioral objectives. Tyler's model relies mainly on behavioral objectives. The objectives in Tyler's model come from three sources (the student, the society, and the subject matter) and all the three sources have to agree on what objectives needs to be addressed. This is a cumbersome process. Thus, it is difficult to arrive to consensus easily among the various stakeholders groups. The second criticism is that, it is too restrictive and covers a small range of student skills and knowledge. The third criticism is that Tyler's model is too dependent on behavioral objectives and it is difficult to declare plainly in behavioral objectives the objectives that covers none specific skills such as those for critical thinking, problem solving, and the objectives related to value acquiring processes (Prideaux, 2003). The fourth and last criticism is that the objectives in the Tyler's model are too student centered and therefore the teachers are not given any opportunity to manipulate the learning experiences as they see fit to evoke the kind of learning outcome desired.

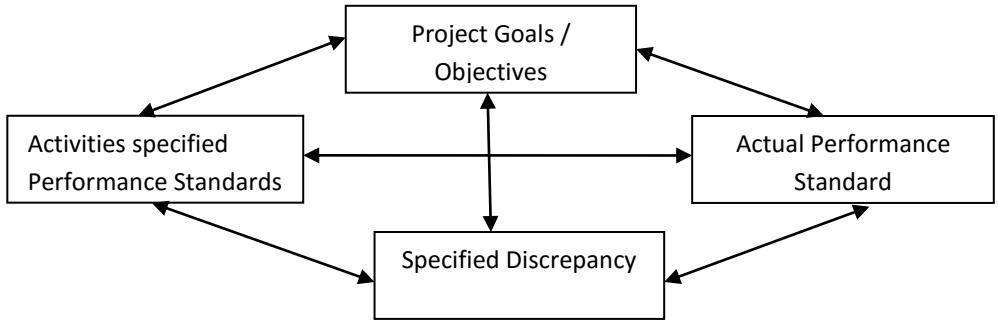

Figure 7.1: Tyler's Model

From the Tyler's figure above, the beginning point of the curriculum development is educational objectives. Educational objectives are clear statements of what it is students know or be able to do as a result of a programme. Once the objectives are clearly delineated, the next angle of the triangle is concerned with designing and organizing the educational experiences that are likely to helps students master those objectives. The final stage of the triangle is concerned with the determining the whether the

objectives are being attained, that is evaluating the programme in terms of the objectives. The objectives based evaluation focused inclusively on the degree of attainment of the pre-specified objectives of the specific statements of educational objectives in terms of student behavior and specific content. Once the objectives are explicitly delineated, the next step is to develop assessment techniques that permit students to demonstrate the behavior in question. If the objective is clearly stated, the form the assessment can take is also clear.

Once measures of the objectives are developed, they are administered as pre- test to students before the prgoramme begins. The pre-test provides a baseline against which to compare performance at the end of the programme, when the students take the post- test. Changes from pre- test to post- test in the percentages of the students mastering each objective become the key criteria of the programme's success. Tyler's posited four fundamental questions or principles in examining any curriculum in schools. These four fundamental principles are as follows:

i. What educational purposes should the school seek to attain?
ii. What educational experiences can be provided that is 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 or not?

Advantages of the Tyler's Model

- It is good common sense to ask whether a programme has met its goals. Consequently, the model is widely used and credible.
- It forces programme personal to be clear about their indented outcomes and can be used to hold them accountable for attainment of outcomes.
- It minimizes disruption and instruction on the part of the evaluator, who only appear briefly to administer tests.
- The objectives are relatively inexpensive, particularly when standarsed machine scored tests are used.
- It provides easily quantifiable, "objectives" information about student performance
- It is easy to assess whether the project objectives are being achieved

- The model checks the degree of congruency between performance and objective
- The model focuses on clear definition of the objectives
- It is easy to understand in terms of implementation
- It produces relevant information to the project

Limitation of the Tyler's Model

- The problem is that main goals cannot be specified in terms of easily measured behavior objectives, e.g. goals of preparing children to be good citizen.
- Most of the behavioral objectives are often a difficult process involving complex issues of feasibility, reliability, and validity.
- Programme often have unintended outcomes that may be more important than the goals of a programme either positively or negatively.
- Focusing on whether objectives have been attained does not address the worth of the objectives themselves
- It tends to focus on terminal rather than on-going programme performance
- It has a tendency to focus directly and narrowly on objectives with the little attention on the worth of the objectives
- It neglect the value of the objectives themselves
- It neglect the transaction the occurs within the project being evaluated
- It neglect the context in which the evaluation is taking place
- It ignores important outcomes other than those covered by the objectives
- It promotes linear, inflexible approach to evaluation
- There is a tendency to oversimplify project and tendency to focus on terminal rather than on –going and pre-project information
- It does not take unplanned outcomes into account. This is because it focuses on the stated objectives
- It does not pay enough attention to process evaluation. In other words it does not consider how the activities that lead to achievement of project objectives are carried

7.6.2 Stake's Model

Robert E Stake (1975) made a major contribution to curriculum evaluation in his development of the responsive model, because the responsive model is based explicitly on the assumption that the concerns of the stakeholders - those for whom the evaluation is done - should be paramount in determining the evaluation issues.

Stake recommends an interactive and recursive evaluation process that embodies these steps:

- The evaluator meets with clients, staff, and audiences to gain a sense of their perspectives on and intentions regarding the evaluation.
- The evaluator draws on such discussions and the analysis of any documents to determine the scope of the evaluation project.
- The evaluator observes the program closely to get a sense of its operation and to note any unintended deviations from announced intents.
- The evaluator discovers the stated and real purposes of the project and the concerns that various audiences have about it and the evaluation.
- The evaluator identifies the issues and problems with which the evaluation should be concerned. For each issue and problem, the evaluator develops an evaluation design, specifying the kinds of data needed.
- The evaluator selects the means needed to acquire the data desired. Most often, the means will be human observers or judges.
- The evaluator implements the data-collection procedures.
- The evaluator organizes the information into themes and prepares "portrayals" that communicate in natural ways the thematic reports. The portrayals may involve videotapes, artifacts, case studies, or other "faithful representations."

Stake proposed a model for curriculum evaluation Congruence - Contingency model (1969) is also known as Countenance model. The principal ways of processing the descriptive evaluate data: finding the contingencies among antecedents, transactions and outcomes and findings the congruence between events and observations.

- *Antecedents* are conations existing before the treatment beings i.e., student attitudes, achievement levels, attendance, etc. and teacher attitudes, years of experience, tec.
- *Transactions* are interactions among students, teachers, materials, and environment in the teaching learning process.
- *Outcomes* are the consequences of the programme – cognitive, affective, personal community- wide, immediate, and long-term.

Intent (intended students' outcome objective) and observations are congruence if what was intended actually happens, to be fully congruent the intended antecedents, transactions, outcomes must be identical with the observed antecedents, transactions, and outcomes. (This seldom happen and often should not). Greater congruence is between the intended and the observed outcomes, the better. Some evaluation studies concentrate only on the congruence between intended and observed outcomes. If our purpose is to continue a good curriculum or revise a poor one, we should know about congruence of antecedents and transactions as well. Contingencies are relationship among the variables. An evaluator's search for contingency is in effect the search for casual relationships. These are what Hasings (1966) called the "Ways of outcomes", Knowledge of what causes what obviously facilitates the improvement of instruction. One of the evaluator's tasks is identifying outcomes they are contingent upon particular antecedent conditions and particular instructional transactions.

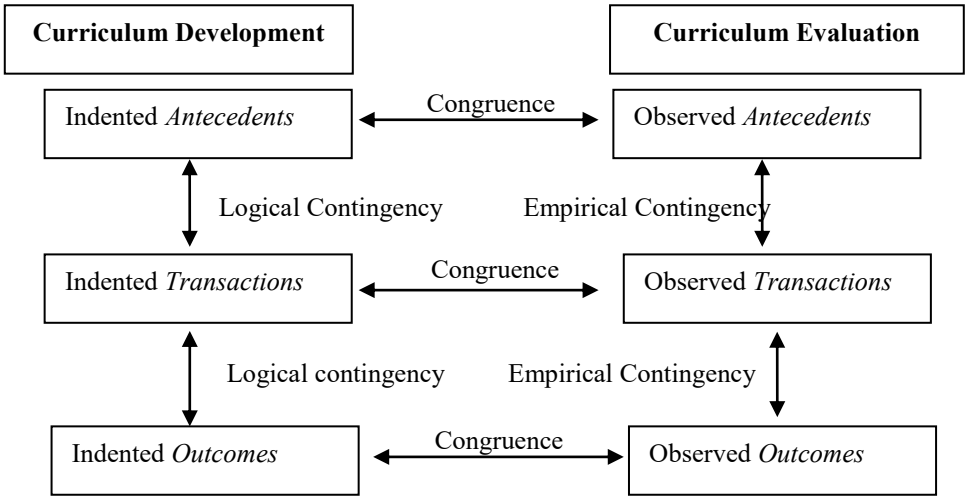

Figure: 7.2 Stake's Matrix for Processing Descriptive Data (adapted)

For as long as, there has been schooling, curriculum planning has rested upon faith certain contingencies. Today, every teacher arranges his presentation and the learning environment in a way that according to his logic – leads to the attainment of his instructional goals. On first step in evaluation is to record the potential contingency. A film of on floodwaters may be scheduled (intended transaction) to expose students to background for understanding conservation legislation (intended outcomes). Of those who know both subject matter and pedagogy, we ask, "is there a logical connection between this event and purpose?" if so, a logical contingency exists between these two intents. Whenever intents are evaluated, the contingency criterion is one of the logic. To test the logic of an educational contingency, evaluators' replies on previous experience, perhaps on research experience, with similar observable, on immediate observation of these variables, however, is necessary to test the strength of the contingencies among events.

Evaluation of observation contingencies depends on empirical evidence. To say, 'this arithmetic class progressed rapidly because the teacher was somewhat but not too sophisticated in mathematics' demands empirical data, either from, within the evaluation or from the research literature. The usual evaluation of a single programme will not alone provide the data necessary for contingency statements. Relationship requires variation in the independent variables. What happened with various teaching treatment? Here, too, as Ausubel has contended (1966), previous experience with this content and with these teaching methods is a basic qualification of the evaluator.

By again being sensitive to the concerns of the stakeholders, the evaluator decides which audiences require which reports and chooses formats most appropriate for given audiences. (As cited by Glatthorn, 1987, pp. 275–276) Clearly, the chief advantage of the responsive model is its sensitivity to clients. By identifying their concerns and being sensitive to their values, by involving them closely throughout the evaluation, and by adapting the form of reports to meet their needs, the model, if effectively used, should result in evaluations of high utility to clients. The responsive model also has the virtue of flexibility: The evaluator is able to choose from a variety of methodologies once client concerns have been identified. Its chief weakness would seem to be its susceptibility to manipulation by clients, who in

expressing their concerns might attempt to draw attention away from weaknesses they did not want exposed.

7.6.3 Taba's model

Hilda Taba, Curriculum theorist, curriculum reformer, and teacher educator contributed to the theoretical and pedagogical foundations of concept development and critical thinking in social studies curriculum and helped to lay the foundations of education for diverse student populations. Initially, she argued that learning and the study of learning should be modeled after dynamic models derived from contemporary physics. Rather than relying on observation, prediction, and measurement of static phenomena, educators should see learning as a dynamic interactive phenomenon that is informed by the developing field of cognitive psychology. Thus she established a paradigm that was appreciably different from a simple transmission model of education and evaluation. Second, she argued that education for democracy was a critical component of contemporary schooling and curricula, and that it needed to be experiential, where children learn to solve problems and resolve conflicts together. Her thinking in democratic education foreshadowed constructivist curricula. Third, she argued that educators had to provide conceptually sound curriculum that was organized and taught effectively, and that student understanding had to be evaluated using appropriate tools and processes. This last goal led to her groundbreaking work in evaluating social attitudes in Progressive education curricula.

Over the next four decades, Taba's work as a curriculum theorist developed. The combination of her considerable intellect, her appreciation for democracy, which grew as intellectual freedom in Estonia diminished in the middle years of the twentieth century, her belief in the power of individuals and groups in educational contexts to realize significant social goals, and her expressed commitment to demonstrate empirically the effects of social education established her leadership in curriculum generally and in three major twentieth century projects specifically. Taba's contribution to the study was evaluation of social sensitivity, which was related to the general goal of preparing students for effective democratic participation. Using multiple means of evaluation that included group activities, informal conversations, anecdotal

records, reading records, and book reviews, Taba delved under the surfaces of social phenomena to identify the attitudes and problems in students' social life that would contribute to a particular phenomenon. She tackled a challenging area of social studies curriculum, the measurement of attitudes about race, class, and ethnicity and at the same time provided authentic alternatives to paper and pencil assessment.

Taba's Curriculum Framework

In 1951 Taba left the Intergroup Education Center to take a position at San Francisco State College, where her third curriculum reform project developed. Working collaboratively with teachers and administrators in Contra Costa County, California, a San Francisco Bay area community, Taba formulated, researched, and wrote about the foundations of curriculum development. Taba and her colleagues from the college and the county schools explicated and documented the complex processes associated with concept formation by children using social studies curriculum. She and her staff organized and implemented staff development for teachers, and documented the processes for research purposes.

On the other hand, Hilda Taba improved on Tyler's Rationale by making a linear model. She believed that teachers who teach or implement the curriculum should participate in developing it. Her advocacy was commonly called the *grassroots approach.* She presented the following seven major steps:

1. Diagnosis of learner's needs and expectations of the larger society.
2. Formulation of learning objectives.
3. Selection of learning content.
4. Organization of learning content.
5. Selection of learning experiences.
6. Organization of learning activities.
7. Determination of what to evaluate and the means of doing it.

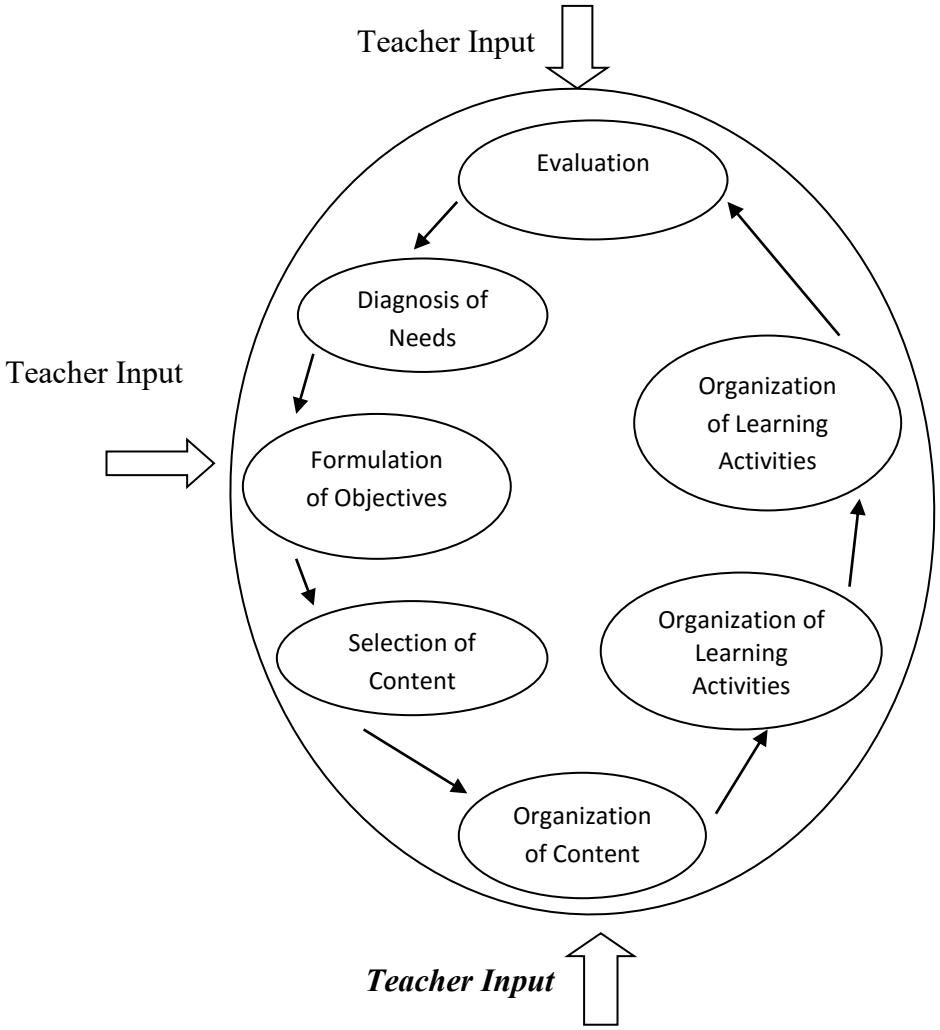

Figure 7.3: Taba's Curriculum Development Model

Taba's close associate, Mary Durkin, a teacher and curriculum specialist from the Contra Costa County schools, anchored the critical bridge between Taba's theoretical work and her practice of teaching classroom teachers about concept attainment and writing curriculum. The Taba Spiral of Curriculum Development is a graphic organizer, which was designed to illustrate concept development in elementary social studies curriculum that was used by teachers in Taba workshops in the 1960s. That graphic tool has sustained its utility and is found in curriculum texts in the early twenty-first century. Taba's theorizing and curriculum development processes provided a blueprint for curriculum development in the twentieth century. She comprehended and articulated the complex connections between culture, politics, and social change; cognition and learning; and experience and evaluation in curriculum development and

significance of all three for teacher preparation and civic education. It is concluded that Hilda Taba believed that the curriculum should be designed by the teachers rather than handed down by higher authority. Further, she felt that teachers should begin the process by creating specific teaching-learning units for their students in their schools; she advocated an inductive approach to curriculum development. In the inductive approach, curriculum workers start with the specifics and build up to a general design as opposed to the more traditional deductive approach of starting with the general design and working down to the specifics. Maintaining training for new teachers on the method as well as support needed for teachers as they must review the plan often.

Check Your Progress 2

Notes: a. Write your answers in the space given below.
b. Compare your answers with those given at the end of this unit.

1. What are the four major parts of Tyler's Model?
   .....
   .....
   .....
2. What re the principle ways of processing data in Stake's Model?
   .....
   .....
   .....
3. List the seven steps proposed in Taba's Evaluation Model.
   .....
   .....
   .....

7.6.4 Mukhopadhaya's Model Curriculum Evaluation

Outcome-based education is a recent development in modern curriculum planning. Outcome-based educational models have been used successfully. Assessment is important in an outcome-based model, as it allows us to decide whether trainees have learnt what was expected to be learnt. It has been stressed that a good doctor's practice is a congruous blend of knowledge, skills and attitudes, rather than executing these domains in isolation. This model of curriculum has been developed in Indian conditions. This model is similar to Hilda Taba's model of curriculum. This model is also based on B.S Bloom evaluation approach. The term evaluation is used in this model is as defined

B.S Bloom. Under this model evidences and data are collected, and these are interpreted in the light of curriculum. The learning process is based on teaching. The relationship is established between teaching and learning both are objective centered. The teaching activities performed with the help of content to be taught. Thus there are two stages of curriculum development process; these stages are divided in to five steps.

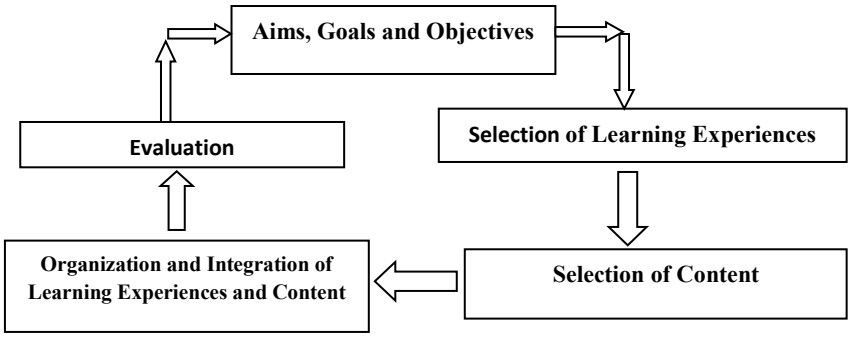

***Figure 7.4**: Mukhopadhaya's Curriculum Model*

Stage I/ Phase I: Curriculum Development

Step 1: Identification initial objectives

Step 2: Writing specific objectives, Organisation of content and instruction aids, instructional procedure to be decided.

Step 3: Use of available material in the school by student or for teaching learning situations.

Stage II / Phase II: Curriculum Development

Step 4: Source development and teacher experience are used for the modification of curriculum.

Step 5: Continuous observation and evaluation of teaching learning activities to make the cyclic process.

The details of the steps are as follows:

- At the very beginning students are identified;
- The specific objectives are identified and written in behavioral terms. These may be cognitive, affective and psychomotor.
- The taxonomy of educational objectives is used for this purpose.
- The level of teaching is also decided memory level, understanding level, and reflective level. Materials also decided to avail for

instructional purpose and finally the there will be a continuous observation of teaching and learning executed for the goal attainment.

Mukopadhya's model has been developed in Indian conditions. This model is also based on Benjamin Bloom's evaluation approach. The learning process is based on teaching. Both learning and teaching are based on objectives. Teaching activities are performed with the help of the content to be taught:

- Identification of initial objectives
- Deciding the instructional procedure
- Using the available instructional resources
- Feedback for modification of curriculum
- Continuous observation and evaluation of the teaching-learning activities

7.6.5 Saran's Curriculum Model

This model was developed by Y.Saran in 1976. It is most popular and commonly used model of curriculum. It was developed through system analysis approach which is very significant and empirical. It is based on technological components. The model is influenced by instructional design. The main emphasis is given on specific or behavioral objectives. The input, process and output are analyzed modified and improved.

This model has three main aspects. They are input, process and output. The main tress is given on output aspect to diagnose and evaluate the workability of the curriculum system. The details of these aspects have been provided in the following.

***Figure 7.5**: Saran's Curriculum Model*

i. Input: This aspect has been divided into three components

- Sources of content, need and views of the subjects
- Selection of content and formulating objectives
- Develop the format of curriculum.

In the first component, sources are located with help of subject experts. The need of the content is also emphasized by subject experts.

ii. Process: This includes that the objectives are identified on the basis of need and structure of the content. The form of content is decided on the basic objectives. There is taxonomy of objectives in each domain. The objectives and subject content are employed in curriculum construction.

iii. Output Aspect: Input and output aspects are equally important in curriculum construction. The curriculum is the basis for preparing instructional procedure and organizing learning experience.

The process aspects are a link or bridge between input aspects of educational process the output aspect includes several factors along with the evaluation. The input and process aspect are decided on the basis of evaluation or output the evaluation is always objective centered and criterion reference task are used. The evidence and data are interpreted in the light of objectives whether these could be achieved or not. It also identified as feedback. The causes of weakness or not achieving objectives are identified for improving the whole system, i.e. input, process and output. The diagnosis is also the main function of evaluation. It provides a guideline for improving the curriculum. Thus, system analysis is used the model of curriculum. On the basis of input, process and output analysis, the steps are identified for curriculum development.

- Survey is done for need based assessment
- Assessment is done for future needs of the society and students.
- Identification of objectives (input aspect)
- Writing objectives in the behavioral terms i.e. specification
- Selection of the content with help of the subject experts
- Designing and preparing evaluation system (output aspect)
- Resource of development of curriculum
- Empirical tryout of new model of curriculum to examine to workability
- Review of system analysis.

Assumptions of Saran's model

- No curriculum is complete and perfect in itself.
- Every curriculum requires modification and improvement.
- New curriculum developed may not also be complete in itself.
- Therefore, it is better to analyze the existing curriculum to diagnose its weakness which can be rectified and improvements could be brought.

- All the three elements such as input, process and output help in evolving effective model of curriculum.

Check Your Progress 3

Notes: a. Write your answers in the space given below.
b. Compare your answers with those given at the end of this unit.

1. What would be the teaching activities performed according to Mukhopadhaya's Model of Evaluation?
   .....
   .....
   .....
2. Enlist the activities are to be done in Input aspect of Saran's Model of Evaluation:
   .....
   .....
   .....

7.7 OUTCOMES OF CURRICULUM EVALUATION

The following are the evaluation outcomes:

Evaluation is the process of determining the values of something or the extent to which goals are being achieved; the out of outcomes of evaluation,

- provides process information that are collected through assessments;
- provides reasoning process based on influence;
- provides judgment we make about the assessment of students' learning
- provides information of teaching-learning procedures
- provides direction to the administrator and policy
- provides direction to the teaching executors for orientation of the next instruction activities
- provides guidance to the agency for their further assessment of schools' functioning in the light of national development

Outcome of evaluations measure programme results or outcomes. These can be both short and long-term outcomes. A short-term outcome may be the use of standardized protocols and procedures by practitioners in a health facility. A long-term outcome may be the sector and system-wide integration of those policies. Evaluation measures the difference between what happened with the programme and what would have happened without it. To measure evaluation, an evaluation is to be typically conducted at the start and again at the end of a

programme with appropriate measuring strategies in terms of learner's achievement. Curriculum evaluation is an important issue in the curriculum reform. At present, curriculum evaluation in our country mainly includes the following aspects:

- the demand evaluation before curriculum reform;
- the pre-evaluation and revised evaluation on curriculum standards;
- the profound evaluation on teaching materials and the evaluation on curriculum implementation

Through examining and reflecting on the above evaluation work, we found that there exist some problems, such as the over general understanding of the concept of curriculum evaluation, lack of systematic curriculum evaluation organization, absence of the local-based and school-based evaluation and over stress on administrative evaluation. In order to solve these problems and improve the quality of evaluation, we should reinforce the theoretical research of curriculum evaluation, strengthen the local-based especially school-based evaluation, establish effective curriculum standards and rational curriculum evaluation system, and also reinforce the dialogue and negotiation in the process of evaluation.

7.8 CURRICULAR ISSUES AND CONCERNS

- Issues in the varied implementation of the curriculum among schools and teachers seem to be one of the reasons for the prevailing low performance of schools all over the country. Issues like ill prepared teachers, poor attitude towards change and low moral have been thrown to teachers. Leadership support from principal is also mention. All of these factors are support to an effective implementation of the curriculum.
- Curricular innovations lack the sense of ownership from the stakeholders. Most of the curricular innovations are handed down from the top management. Those who are going to implement simply to the line are followed blindly. Sometimes the implementers lack full understanding of the changes or modifications that they are doing. The

goal is unclear, thus there are a lots of questions in the implementations as well as evaluation from the concerned persons.

- Some curricular innovations are results of bandwagon but are not well supported by managers. In the desire of some school to be part of the global educational scenario, changes and innovations are drastically implemented even if the school is not ready.
- Lack of regular monitoring and evaluation. After a new curriculum has been installed, it is left unattended. Inadequate monitoring of activities to find out curricular strengths or weaknesses and problems are being encountered.
- Innovations results to teacher burn out. With so many changes taking place in the curriculum, many teachers are getting burn out. They get tired so easily and motivation is very low. It is so because they cannot cope with rapid changes that take place.
- Innovations are not communicated to all. Only the managers are the proponents under the changes. Those who are directly involved merely hook line and sinker. This is called regimentation. Changes when introduced this way may falter along the way because the people involved are not empowered.

7.9 RESPONSES TO ISSUES

- NCF has now the full support of the State Department of Education for implementation. Hopefully, all of these initiatives will contribute to the higher achievement and performance among the learners so that they will be at par with their counterparts in the neighboring countries.
- In the installation of the new curriculum or innovation, all stakeholders should be involved. Even in the planning stage, consultation should be held. This process will provide each interested sector or persons to help make decision as to whether the innovation will be introduced or not. This participatory process provides a sense of ownership for all stakeholders. In so doing each one will make sure that the result of the innovation will be positive.

- Before any change will be introduced, a thorough study should be made to established readiness for all concerned. Initial preparation for the implementation to ensure the provision of the necessary materials and the appropriate knowledge about the innovation should be assured. Changing for the sake of change is useless or even irrelevant if the innovation is not well studied. Committees should be informed to address its phase of curriculum installation, implementation and evaluation.
- In the case of the school-based innovations in curriculum innovation, principals have been empowered to conduct monitoring and new curricular programs. This is part of the curricular leadership roles. Curricular experts and practitioners agree that monitoring will enhance efficiency and development, keep teachers on track, and maintain school leaders' involvement in the curriculum.
- Collaboration and the implementation of the new curriculum are very necessary. School heads or managers, teachers, and learners should have adequate information about the innovation before it will be introduced. There is a continuous communication of the different aspect of the innovation. If these are done, there will always be assurance of success.

Check Your Progress 4

Notes: a. Write your answers in the space given below.
b. Compare your answers with those given at the end of this unit.

1. What are the aspects include with curriculum evaluation?
   ……
   ……
   ……
2. What are the responses to issues in curriculum evaluation?
   .....
   .....
   .....

7.10 LET US SUM UP

The process by which some individual or group makes a judgment about the value of some object, person, or process termed as evaluation. Curriculum evaluation is a continuous process for collection information about all the elements and outcomes of the curriculum to help arrive at an understanding of the extent to which they have been achieved and subsequently take decisions to improve their efficacy. Curriculum evaluation may refer to the formal determination of quality, effectiveness or value of the programme, process and product. Curriculum evaluation is a necessary and important aspect of any national education system. It provides the basis for curriculum policy decisions, for feedback on continuous curriculum adjustments and processes of curriculum implementation. Practitioners and implementers of the curriculum may select any one of the curriculum evaluation model to evaluate the given curriculum. In this process, the selected curriculum must be forward thinking; it must provide students with those learning experiences that enable them to become knowledge, self-directed, responsible individuals able to adapt to and cope with a complex and rapidly changing society. The ultimate aim of curriculum evaluation is to be properly done so as to attune the achievement of the students and other objectives' attainment in an expected way productively.

7.11 UNIT END ACTIVITIES

1. Analyze different models of evaluation and give your views on new curriculum frameworks.
2. Give your suggestions in integrating value based curriculum in accordance with the different models of curriculum evaluation.

7.12 POINTS FOR DISCUSSION

1. Explain the concept of curriculum evaluation with the examples'.
2. Explain the Taylor's model of curriculum with its advantages and limitations.
3. Write a note Taba's Curriculum Framework.
4. Explain Saran's models of evaluation with its assumptions.
5. Explain the issues related to curriculum evaluation and follow-up activates.

7.13 ANSWERS TO CHECK YOUR PROGRESS

Check Your Progress 1

1. Curriculum Evaluation provides the following information;

- Directly to the learner for guidance
- Directly to the teacher for orientation of the next instruction activity
- Directly to external agency for their assessment of schools functioning in the light of national purposes

2. The objectives of curriculum evaluation are listed as:

- To determine the outcomes of programme
- To help in deciding whether to accept or reject a programme
- To ascertain the need for revision of the course content
- To help in future development of the curriculum material for continuous improvement
- To improve methods of teaching and instructional techniques

3. The perspectives of Curriculum Evaluation are:

- Traditional
- Experimental
- Behaioural
- Structure of Behaviour
- Constructivist

Check Your Progress 2

1. The four major parts of Tyler's model are:

- defining objectives of the learning experience
- identifying learning activities for meeting the defined objectives
- organizing the learning activities for attaining the defined objectives
- evaluating and assessing the learning experiences

2. In Stake's Contingency model of evaluation, the principle ways of processing the data are:

- finding the contingencies among antecedents, transactions and outcomes and
- findings the congruence between events and observations

3. Taba proposed the following seven steps of her Evaluation model:

- Diagnosis of learner's needs and expectations of the larger society.
- Formulation of learning objectives
- Selection of learning content
- Organization of learning content
- Selection of learning experiences
- Organization of learning activities
- Determination of what to evaluate and the means of doing it

Check Your Progress 3

1. According to Mukhopadhaya's model of evaluation, Teaching activities are performed as

- Identification of initial objectives
- Deciding the instructional procedure
- Using the available instructional resources
- Feedback for modification of curriculum
- Continuous observation and evaluation of the teaching-learning activities

2. The input aspect has to be done the following activities:

- Sources of content, need and views of the subjects
- Selection of content and formulating objectives
- Develop the format of curriculum.

Check Your Progress 4

1. Curriculum evaluation mainly includes the following aspects:

- the demand evaluation before curriculum reform;
- the pre-evaluation and revised evaluation on curriculum standards;
- the profound evaluation on teaching materials and the evaluation on curriculum implementation.

2. The following are the some of the responses to issues in curriculum evaluation:

- National Curriculum Framework (NCF) has to give the full support of the State Department of Education for its implementation.
- In the installation of the new curriculum or innovation, all stakeholders should be involved. Even in the planning stage, consultation should be held.
- Before any change will be introduced, a thorough study should be made to established readiness for all concerned. Initial preparation for the implementation to ensure the provision of the necessary materials and the appropriate knowledge about the innovation should be assured.
- In the case of the school-based innovations in curriculum innovation, principals have been empowered to conduct monitoring and new curricular programmes.
- Collaboration and the implementation of the new curriculum are very necessary. School heads or managers, teachers, and learners should have adequate information about the innovation before it will be introduced. There is a continuous communication of the different aspect of the innovation.

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