Curriculum Development
Bed IV Semester
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Institute of Advance Studies in Education
Unit I: Curriculum Process

- Meaning of Curriculum
- Aims and Functions of Curriculum
- Curriculum Objectives- Bloom’s Taxonomy
- Determinants of Curriculum – Philosophical, Psychological and Sociological

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 lists 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.

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.

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) defined 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 organize 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.
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.

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 realize 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.

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 to be studies in each school year. The syllabus is a refined detail of the curriculum at a particular stage of learning for a particular subject and establish in detail the themes and individual.
<table>
<thead>
<tr>
<th><strong>CURRICULUM</strong></th>
<th><strong>SYLLABUS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Curriculum is based on the philosophy, goals and values of education.</td>
<td>Syllabus does not take into account these factors</td>
</tr>
<tr>
<td>Curriculum refers to all the educational activities of the school in the widest possible sense</td>
<td>Syllabus refers to a list of subjects.</td>
</tr>
<tr>
<td>Curriculum is the sum total of school subjects, learning experiences and activities.</td>
<td>It is basically concerned with school Subjects</td>
</tr>
<tr>
<td>There is prescribed co-curricular and extra-curricular activities in the curriculum.</td>
<td>No prescribed co-curricular and extra-curricular activities in the form of syllabus.</td>
</tr>
<tr>
<td>Curriculum includes not only indoor activities but also out-door activities of the school</td>
<td>Syllabus is concerned with activities mostly undertaken in the class room (in-door activities)</td>
</tr>
<tr>
<td>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.</td>
<td>The syllabus has a limited role to Play.</td>
</tr>
<tr>
<td>It is an inclusive concept. It includes syllabus also.</td>
<td>It is a part of a curriculum.</td>
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**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 behavior of the learners. Learning experiences are provided through the desirable change of behaviors of the pupils which are evaluated with help of examinations Therefore, the term is known as “curriculum development”. The main focus of the curriculum is to develop the students. The curriculum is designed to realize the objectives in terms of changing of behaviors. 1. Teaching objectives, 2. Methods of teaching, 3. Examination or testing, and Feedback. 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 behavioral terms. All learning experiences are organized to achieve these objectives.

**b. Methods of teaching:** the most important aspect for providing learning experiences is the teaching strategies. The objectives are legalized in terms of behavioral 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 behavior if done to ascertain about the realization 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.

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

The vocational and technical educations prepare the students for different jobs. During British period, clerks were prepared through educational curriculum. The interests and attitude are developed according to the student’s potentialities. Curriculum is designed as child centered approach. The good citizens are prepared by the developing democratic way of life. It also develops the abilities and capacity of the teachers. The ability of the self-realization is also developed by education. It also develops the feeling of appreciation and sound judgment. Education is given always for future life so that he can earn his living. 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. In other words, the following are the major area of needs of Curriculum development:

a. **Realization of Educational Objectives:** An organization of education is based on the curriculum. The curriculum development is done in view to realize 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 organization 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.

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

**Curriculum Objectives: Bloom’s Taxonomy**

Most educators are quite familiar with *Bloom's Taxonomy of Educational Objectives.* For many, understanding the levels of thinking represented in this taxonomy was a cornerstone of required educational methods courses. In recent years, as educators have become increasingly focused on the accurate assessment of student learning, the original taxonomy has been revisited and revised. Unlike the original, the revised framework is two-dimensional. In the newer model, the two dimensions are cognitive process and knowledge. These two components operate like an *X* and *Y* axis: the cognitive level (evident from a verb that represents student learning) would be placed on horizontal axis, and the type of knowledge (evident from the nouns that represent what the student is to learn) would be placed on the vertical. The six cognitive processes in the revised taxonomy are *remember,* *understand,* *apply,* *analyze,* *evaluate,* and *create.* These are just slightly different from the original six levels of Bloom’s Taxonomy. The four categories of knowledge in the revised taxonomy are *factual,* *conceptual,* *procedurals.* This revised taxonomy works well with the “unwrapping” process and later, in designing effective assessment items. In order to place an objective in the taxonomy, teachers must first “unwrap” a standard to discover what it requires cognitively (the verb) and knowledge wise (the nouns that delineate content and concepts). Once they have determined the correct placement, then the “bare bones” of the assessment items are set. However, the placement is important, because different types of objectives require different approaches to assessment. The list on the following pages contains lists of verbs that approximate the particular levels of student learning. It is important to “unwrap” standards and ensure each standard is placed in the taxonomy table before designing appropriate assessment items.

**Cognitive process 1: To remember**

To remember is to retrieve relevant knowledge from long-term memory. Verbs associated with this level: choose, define, describe, find, identify, label, list, locate, match, name, recall, recite, recognize, record, relate, retrieve, say, select, show, sort, tell.
Cognitive process 2: To understand
To understand is to construct meaning from instructional messages, including oral, written, and graphic communication. Verbs associated with this level: categorize, clarify, classify, compare, conclude, construct, contrast, demonstrate, distinguish, explain, illustrate, interpret, match, paraphrase, predict, represent, reorganize, summarize, translate, understand.

Cognitive process 3: To apply
To apply is to carry out or use a procedure in a given situation. Verbs associated with this level: apply, carry out, construct, develop, display, execute, illustrate, implement, model, solve, use.

Cognitive process 4: To analyze
To analyze is to break material into its constituent parts and determine how the parts relate to one another and to an overall structure or purpose. Verbs associated with this level: analyze, ascertain, attribute, connect, deconstruct, determine, differentiate, discriminate, dissect, distinguish, divide, examine, experiment, focus, infer, inspect, integrate, investigate, organize, outline, reduce, solve (a problem), test for.

Cognitive process 5: To evaluate
To evaluate is to make judgments based on criteria and standards. Verbs associated with this level: appraise, assess, award, check, conclude, convince, coordinate, criticize, critique, defend, detect, discriminate, evaluate, judge, justify, monitor, prioritize, rank, recommend, support, test, value.

Cognitive process 6: To create
To create is to put elements together to form a coherent or functional whole; reorganize element into a new pattern or structure; inventing a product. Verbs associated with this level: adapt, build, compose, construct, create, design, develop, elaborate, extend, formulate, generate, hypothesize, invent, make, modify, plan, produce, originate, refine, transform.
Revised Bloom’s Taxonomy

In 1999, Dr. Lorin Anderson, a former student of Bloom’s, and his colleagues published an updated version of Bloom’s Taxonomy that takes into account a broader range of factors that have an impact on teaching and learning. This revised taxonomy attempts to correct some of the problems with the original taxonomy. Unlike the 1956 version, the revised taxonomy differentiates between “knowing what,” the content of thinking, and “knowing how,” the procedures used in solving problems. The Knowledge Dimension is the “knowing what.” It has four categories: factual, conceptual, procedural, and meta cognitive. Factual knowledge includes isolated bits of information, such as vocabulary definitions and knowledge about specific details. Conceptual knowledge consists of systems of information, such as classifications and categories. Procedural knowledge includes algorithms, heuristics or rules of thumb, techniques, and methods as well as knowledge about when to use these procedures. Metacognitive knowledge refers to knowledge of thinking processes and information about how to manipulate these processes effectively. The Cognitive Process Dimension of the revised Bloom’s Taxonomy like the original version has six skills. They are, from simplest to most complex: remember, understand, apply, analyze, evaluate, and create.

Remembering
Remembering consists of recognizing and recalling relevant information from long-term memory.

Understanding
Understanding is the ability to make your own meaning from educational material such as reading and teacher explanations. The sub skills for this process include interpreting, exemplifying, classifying, summarizing, inferring, comparing, and explaining.

Applying
The third process, applying, refers to using a learned procedure either in a familiar or new situation.

Analysis
The next process is analysis, which consists of breaking knowledge down into its parts and thinking about how the parts relate to its overall structure. Students analyze by differentiating, organizing, and attributing.

Evaluation
Evaluation, which is at the top of the original taxonomy, is the fifth of the six processes in the revised version. It includes checking and critiquing.
Creating

Creating, a process not included in the earlier taxonomy, is the highest component of the new version. This skill involves putting things together to make something new. To accomplish creating tasks, learners generate, plan, and produce. According to this taxonomy, each level of knowledge can correspond to each level of cognitive process, so a student can remember factual or procedural knowledge, understand conceptual or meta cognitive knowledge, or analyze meta cognitive or factual knowledge. According to Anderson and his colleagues, “Meaningful learning provides students with the knowledge and cognitive processes they need for successful problem solving”. The following charts list examples of each skill of the Cognitive and Knowledge Dimensions.

Cognitive Processes Dimensions

Cognitive Processes Examples

Remembering—Produce the right information from memory

Recognizing • Identify frogs in a diagram of different kinds of amphibians.

• Find an isosceles triangle in your neighborhood.

• Answer any true-false or multiple-choice questions.

Recalling • Name three 19th-century women English authors.

• Write the multiplication facts.

• Reproduce the chemical formula for carbon tetrachloride.

Understanding—Make meaning from educational materials or experiences

Interpreting • Translate a story problem into an algebraic equation.

• Draw a diagram of the digestive system.

• Paraphrase Jawaharlal Nehru's tryst with destiny speech.

Exemplifying • Draw a parallelogram.

• Find an example of stream-of-consciousness style of writing.

• Name a mammal that lives in our area.

Classifying • Label numbers odd or even.

• List the events of the Sepoy Mutiny of 1857.

• Group native animals into their proper species.

Summarizing • Make up a title for a short passage.

• List the key points related to capital punishment that the Website promotes.
Inferring • Read a passage of dialogue between two characters and make conclusions about their past relationship.
• Figure out the meaning of an unfamiliar term from the context.
• Look at a series of numbers and predict what the next number will be.

Comparing • Explain how the heart is like a pump.
• Compare Mahatma Gandhi to a present day leader.
• Use a Venn diagram to demonstrate how two books by Charles Dickens are similar and different.

Explaining • Draw a diagram explaining how air pressure affects the weather.
• Provide details that justify why the French Revolution happened when and how it did.
• Describe how interest rates affect the economy.

Applying—Use a procedure

Executing • Add a column of two-digit numbers.
• Orally read a passage in a foreign language.
• Have a student open house discussion.

Implementing • Design an experiment to see how plants grow in different kinds of soil.
• Proofread a piece of writing.
• Create a budget.

Analyzing—Break a concept down into its parts and describe how the parts relate to the Whole.

Differentiating • List the important information in a mathematical word problem and cross out the unimportant information.
• Draw a diagram showing the major and minor characters in a novel.

Organizing • Place the books in the classroom library into categories.
• Make a chart of often-used figurative devices and explain their effect.
• Make a diagram showing the ways plants and animals in your neighborhood interact with each other.

Attributing • Read letters to the editor to determine the authors’ points of view about a local issue.
• Determine a character’s motivation in a novel or short story.
• Look at brochures of political candidates and hypothesize about their perspectives on issues.
Evaluating—Make judgments based on criteria and syllabus guidelines.

Checking • Participate in a writing group, giving peers feedback on organization and logic of arguments.

• Listen to a political speech and make a list of any contradictions within the speech.

• Review a project plan to see if all the necessary steps are included.

Critiquing • Judge how well a project meets the criteria of a rubric.

• Choose the best method for solving a complex mathematical problem.

• Judge the validity of arguments for and against astrology.

Creating—Put pieces together to form something new or recognize components of a new structure.

Generating • Given a list of criteria, list some options for improving race relations in the school.

• Generate several scientific hypotheses to explain why plants need sunshine.

• Propose a set of alternatives for reducing dependence on fossil fuels that address both economic and environmental concerns.

• Come up with alternative hypotheses based on criteria.

Planning • Make a storyboard for a multimedia presentation on insects.

• Outline a research paper on Mark Twain’s views on religion.

• Design a scientific study to test the effect of different kinds of music on hens’ egg production.

Producing • Write a journal from the point of view of mountaineer.

• Build a habitat for pigeons.

• Put on a play based on a chapter from a novel you’re reading.

Original Bloom Taxonomy

The Cognitive Domain (Knowledge-Based)

In the original version of the taxonomy, the cognitive domain is broken into the following six levels of objectives.

Knowledge

Knowledge involves recognizing or remembering facts, terms, basic concepts, or answers without necessarily understanding what they mean. Its characteristics may include:

• Knowledge of specifics—terminology, specific facts
Knowledge of ways and means of dealing with specifics—conventions, trends and sequences, classifications and categories, criteria, methodology
Knowledge of the universals and abstractions in a field—principles and generalizations, theories and structures

**Comprehension**

Comprehension involves demonstrating understanding of facts and ideas by organizing, comparing, translating, interpreting, giving descriptions, and stating the main ideas.

**Application**

Application involves using acquired knowledge—solving problems in new situations by applying acquired knowledge, facts, techniques and rules. Learners should be able to use prior knowledge to solve problems, identify connections and relationships and how they apply in new situations.

**Analysis**

Analysis involves examining and breaking information into component parts, determining how the parts relate to one another, identifying motives or causes, making inferences, and finding evidence to support generalizations. Its characteristics include:

- Analysis of elements
- Analysis of relationships
- Analysis of organization

**Synthesis**

Synthesis involves building a structure or pattern from diverse elements; it also refers to the act of putting parts together to form a whole. Its characteristics include:

- Production of a unique communication
- Production of a plan, or proposed set of operations
- Derivation of a set of abstract relations

**Evaluation**

Evaluation involves presenting and defending opinions by making judgments about information, the validity of ideas, or quality of work based on a set of criteria. Its characteristics include:

- Judgments in terms of internal evidence
- Judgments in terms of external criteria

**The Affective Domain (Emotion-Based)**

Skills in the affective domain describe the way people react emotionally and their ability to feel other living things' pain or joy. Affective objectives typically target the awareness and
growth in attitudes, emotion, and feelings. There are five levels in the affective domain moving through the lowest-order processes to the highest.

**Receiving**

The lowest level; the student passively pays attention. Without this level, no learning can occur. Receiving is about the student's memory and recognition as well.

**Responding**

The student actively participates in the learning process, not only attends to a stimulus; the student also reacts in some way.

**Valuing**

The student attaches a value to an object, phenomenon, or piece of information. The student associates a value or some values to the knowledge they acquired.

**Organizing**

The student can put together different values, information, and ideas, and can accommodate them within his/her own schema; the student is comparing, relating and elaborating on what has been learned.

**Characterizing**

The student at this level tries to build abstract knowledge.

**The Psychomotor Domain (Action-Based)**

Skills in the psychomotor domain describe the ability to physically manipulate a tool or instrument like a hand or a hammer. Psychomotor objectives usually focus on change and/or development in behavior and/or skills. Bloom and his colleagues never created subcategories for skills in the psychomotor domain, but since then there educators have created their own psychomotor taxonomies. Simpson (1972) proposed the following levels:

**Perception**

The ability to use sensory cues to guide motor activity: This ranges from sensory stimulation, through cue selection, to translation.

**Set**

Readiness to act: It includes mental, physical, and emotional sets. These three sets are dispositions that predetermine a person's response to different situations (sometimes called mindsets). This subdivision of psychomotor is closely related with the "responding to phenomena" subdivision of the affective domain.
**Guided response**

The early stages of learning a complex skill that includes imitation and trial and error: Adequacy of performance is achieved by practicing.

**Mechanism**

The intermediate stage in learning a complex skill: Learned responses have become habitual and the movements can be performed with some confidence and proficiency.

**Complex overt response**

The skillful performance of motor acts that involve complex movement patterns: Proficiency is indicated by a quick, accurate, and highly coordinated performance, requiring a minimum of energy. This category includes performing without hesitation and automatic performance. For example, players will often utter sounds of satisfaction or expletives as soon as they hit a tennis ball or throw a football because they can tell by the feel of the act what the result will produce.

**Adaptation**

Skills are well developed and the individual can modify movement patterns to fit special requirements.

**Origination**

Creating new movement patterns to fit a particular situation or specific problem: Learning outcomes emphasize creativity based upon highly developed skills.

**Determinants of Curriculum: Philosophical, Psychological and Sociological**

**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 the base or starting point in curriculum development or 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 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 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 moths for literary and aesthetic activities. In brief, the idealistic curriculum places heavy emphasis on the world of our own mind and the subject-centered, 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 emphasize the child centered 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-centered 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. 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, machine-like 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-centered 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 subject.

**vi. Essentialism**
Essentialism emphasizes academic subject-centered 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.

**Psychological Foundation of Curriculum**

Education has become child-centered in other words, it has been psychologies. 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 behavior of the learner. The relationship between psychological foundations and curriculum has been analyzed 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 learner 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 learner’s behavioral changes is just one indication of how psychology is influencing educational thought and practice. Selection of curriculum content and its organization are based on various theories of psychology such as the laws of learning (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 organized 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 in 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?

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 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.

UNIT: II Designing the Curriculum

Principles of Curriculum Construction

Selection of Contents for Curriculum for different stages of education:

Pre-primary School Curriculum, Primary School Curriculum, High and Higher Secondary Curriculum
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 ‘curare’, 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 pupil.

**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
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.

**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 Gandhi ji 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.

SECONDARY EDUCATION COMMISSION
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 and Physical Education

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

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

  - **Social Studies, general course for first two years only.**
    - General Science including Mathematics for first two years only
    - 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
Three subjects from one of the following:

- Humanities
- Sciences Technical
- Commercial Agriculture Fine arts
- Home Sciences

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.

**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)**
- One language: Mother Tongue or Regional Language
- Mathematics
- Study of the environment (covering science and social studies in classes III and IV)
- Creative Activities
- Work Experience and Social Service and
- Health education.

**Higher Primary Stage (Classes V-VII)**
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)*

- Mathematics
- Science
- Social studies (History, Geography and Civics)
- Art
- Work Experience and Social Service
- Physical Education and
- Education in Moral and Spiritual Values

**Lower Secondary Stage (Classes VIII-X)**
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)*

- Mathematics
- Science
- History, Geography and Civics
- Art
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 follow

<table>
<thead>
<tr>
<th>Areas of School Work Classes I and II</th>
<th>Percentage of Total Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Language</td>
<td>25</td>
</tr>
<tr>
<td>Mathematic</td>
<td>10</td>
</tr>
<tr>
<td>Environmental Studies-I (Social Studies and General Sciences)</td>
<td>15</td>
</tr>
<tr>
<td>Work Experience and Art</td>
<td>25</td>
</tr>
</tbody>
</table>
### Classes III, IV and V

<table>
<thead>
<tr>
<th>Subject</th>
<th>Percentage of Total Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Language</td>
<td>25</td>
</tr>
<tr>
<td>Mathematic</td>
<td>15</td>
</tr>
<tr>
<td>Environmental Studies-I (Social studies)</td>
<td>10</td>
</tr>
<tr>
<td>Environmental Studies-II (General Sciences)</td>
<td>10</td>
</tr>
<tr>
<td>Work Experience and Art</td>
<td>20</td>
</tr>
<tr>
<td>Health Education and Games</td>
<td>20</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

### Classes VI, VII and VIII

<table>
<thead>
<tr>
<th>Subject</th>
<th>Periods</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Language</td>
<td>8</td>
</tr>
<tr>
<td>second language is added (Hindi or English)</td>
<td>5</td>
</tr>
<tr>
<td>Mathematic</td>
<td>7</td>
</tr>
<tr>
<td>Social Science (History, Geography and Civics)</td>
<td>6</td>
</tr>
<tr>
<td>Science (Physical and Life sciences)</td>
<td>7</td>
</tr>
<tr>
<td>Work experience</td>
<td>4</td>
</tr>
<tr>
<td>The Arts</td>
<td>5</td>
</tr>
<tr>
<td>Physical Education and Games</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>48</strong></td>
</tr>
</tbody>
</table>
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.

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

<table>
<thead>
<tr>
<th>Classes I-V</th>
<th>Time Allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td>One Language</td>
<td>20 per cent</td>
</tr>
<tr>
<td>Mathematics</td>
<td>20 per cent</td>
</tr>
<tr>
<td>Environmental studies (social studies, natural study and Health education)</td>
<td>20 per cent</td>
</tr>
<tr>
<td>Socially Useful Productive Work (SUPW)</td>
<td>20 per cent</td>
</tr>
<tr>
<td>Games and Creative Activities (Music, Dance and Paintings)</td>
<td>20 per cent</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100 per cent</strong></td>
</tr>
</tbody>
</table>
### Classes V – VIII

<table>
<thead>
<tr>
<th>Course Content</th>
<th>Time Allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Languages</td>
<td>7 Hours</td>
</tr>
<tr>
<td>Mathematics</td>
<td>4 Hours</td>
</tr>
<tr>
<td>History, Geography and Civic</td>
<td>4 Hours</td>
</tr>
<tr>
<td>Science – an integrated course</td>
<td>4 Hours</td>
</tr>
<tr>
<td>Games and creative activities (music, dance and paintings)</td>
<td>3 Hours</td>
</tr>
<tr>
<td>Community service</td>
<td>6 Hours</td>
</tr>
<tr>
<td>Games, physical education and supervised study</td>
<td>4 Hours</td>
</tr>
</tbody>
</table>

**Total** 32 Hours

### Classes IX-X

<table>
<thead>
<tr>
<th>Course Content</th>
<th>Time Allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Languages</td>
<td>8 Hours</td>
</tr>
<tr>
<td>Mathematics alternative I or II</td>
<td>4 Hours</td>
</tr>
<tr>
<td>Science, Alternative I (theory And practical) or alternative II</td>
<td>5 Hours</td>
</tr>
<tr>
<td>History, civics and Geography (as one group)</td>
<td>3 Hours</td>
</tr>
<tr>
<td>One of the following Art (Music, Dancing, Painting etc.) Home science, Agriculture, commerce, Classical, Reconstruction, Classical language.</td>
<td>2 Hours</td>
</tr>
<tr>
<td>Socially Useful Productive Work and Community service</td>
<td>6 Hours</td>
</tr>
<tr>
<td>Games, physical education and supervised study</td>
<td>4 Hours</td>
</tr>
</tbody>
</table>

**Total** 32 Hours

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

<table>
<thead>
<tr>
<th>Course Content</th>
<th>Time Allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Language</td>
<td>15 per cent</td>
</tr>
<tr>
<td>2. Socially Useful Productive Work</td>
<td>15 per cent</td>
</tr>
<tr>
<td>3. Electives</td>
<td>70 per cent</td>
</tr>
</tbody>
</table>

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.
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.

- The development of human resources for the realization of the national goals of development.
- Broad Emphasis on the attainment of the personal and social goals and propagation of values 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.

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

<table>
<thead>
<tr>
<th>Subject</th>
<th>Percentage of Time Allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Languages</strong></td>
<td></td>
</tr>
<tr>
<td>The Mother Tongue or Regional Language</td>
<td>30</td>
</tr>
<tr>
<td>Environmental studies</td>
<td>15</td>
</tr>
<tr>
<td>Mathematics</td>
<td>15</td>
</tr>
<tr>
<td><strong>Work experience and socially useful productive work (SUPW)</strong></td>
<td>20</td>
</tr>
<tr>
<td>Art Education</td>
<td>10</td>
</tr>
<tr>
<td>Health and Physical Education</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

### b. Upper Primary stage

<table>
<thead>
<tr>
<th>Subject</th>
<th>Percentage of Time Allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Three languages</td>
<td>32</td>
</tr>
<tr>
<td>2. Science</td>
<td>10</td>
</tr>
<tr>
<td>3. Mathematics</td>
<td>12</td>
</tr>
<tr>
<td>4. Social sciences</td>
<td>12</td>
</tr>
<tr>
<td>5. Work experience / Socially Useful Productive Work (SUPW)</td>
<td>12</td>
</tr>
<tr>
<td>6. Art Education</td>
<td>10</td>
</tr>
<tr>
<td>7. Health and Physical Education</td>
<td>12</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>
c. Secondary Stage

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

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 programme 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.
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.
a) 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

b) 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

c) 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

d) 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

e) 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 follow:

- 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
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 counseling 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.

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
Mathematics
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  
Mathematics  
Environmental Studies  
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)

- Three Languages - the mother tongue/the regional language, modern Indian language and English
- Mathematics
- Science and Technology
- Social Sciences
- Work Education
- Art Education (fine arts: Visual and Performing)
- Health and Physical Education (including games and sports, yoga, NCC and scouting and guiding)

Secondary Stage (2 years)

- Three Languages — the mother tongue/the regional language, modern Indian language and English.
- Mathematics
- Science and Technology
- Social Sciences
- Work Education
- Art Education (fine arts: Visual and Performing)
- 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 primary 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, urbanization 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 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 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**

**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.

**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.

**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, yogi 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.

**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.

**II. Scheme of Studies**

The curriculum at this stage will comprise.

i. Foundation Courses
ii. Elective Course

**i. Foundation Courses**

At the higher secondary stage, students opt for academic or vocational courses. However,
ythey 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:
Language and Literature,
Work Education, and
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.

**iii. 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:

- Language
- General Foundation Course
- Health and Physical Education, and
- 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 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.

UNIT III
Types of Curriculum
Subject Centered Curriculum
Learner-Centered Curriculum
Problem-Centered Curriculum
Core Curriculum
Activity Centered Curriculum
Integrated Curriculum
Correlated Curriculum
TYPES OF CURRICULUM

The types of curriculum can be broadly presented as:

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 programme.
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. 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, Rousseau, 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.

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

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 utilizes 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.

5) Activity Based Curriculum:

The Activity Based Curriculum is also called project curriculum or an experience curriculum but the name activity is a fundamental conception. Activity Curriculum has a long history. The title “Activity Curriculum”, however, did not come into general use before 1920, although Dewey used the expression “Activity Programme” as early as 1897 in a talk to the parents and teachers at his laboratory school in Chicago (U.S.A). Activity is the natural urge of the child. He wants to do things by himself. When curricular material is translated in terms
of activity, it is known as activity curriculum. Learning of the prescribed material takes place through activities. Activity is used as a media or means for imparting knowledge and skills. Activity is the greatest motivation for child. He enjoys the freedom of expressing his potentialities during activities. These activities should not merely be considered as physical activity but also intellectual activity. The educator (teacher) should engage pupils in activities in such a way that while manual skills are gained there should be mental satisfaction found in the work. The students should not be passive listener they should be active participants in the process of learning. True learning is experiencing, while activity is the process then experience becomes the product of activity. Activity results in experience, in fact activity and experience cannot be separated from each other. A purposeful activity must end in gainful experience. The school must, therefore, plan its activities in such a way that students gain mastery on various experiences. Such type of projects should be completed under a problematic situation in a natural setting.

**Characteristics of Activity Curriculum:**

Children’s Interest Determines the Educational Programme: The primary principle of the activity curriculum is that the interests and purposes of children determine the educational programme. The basic principle of the activity programme refers to the felt needs of children and not of adults. Because the educational programs are aimed at doing something in the best interest of the children and not for adults only. It is the task of the teacher to discover these interests and to build educational activities upon them.

Whims (urges) must not be considered as basis of an educational programme.

The interest of the students must be carefully analyzed and then accepted. These intended courses of actions are accepted after their consequences are reviewed. The subject matter is a mean of fulfilling the purposes of an individual or a group and as a result of manipulating subject matter children learn within the boundaries of group interests. The teacher’s responsibility is to find out the interest of individual students and of the groups. He helps children to select the most interesting activity for study; Building a cage for an animal, making preparation for a field trip, gathering information on a current political affair, running a school store, planning family budget. The Activity Curriculum is not planned in Advance: The teacher discovers the interests of students in group or individually. He guides the students in the selections of activity and their interest among activities. He helps them to plan and carry out these activities according to their interests. He also guides the individual or group in assessing what they have accomplished in the process. This is the responsibility of the teachers to make plans for him how to guide the students and their activities in the classrooms. Although, teacher do not come into the classroom with a preplanned subject
matter. He does come with ideas and a background of experience of the students and their interests. These are his working tools. Activities are Planned Co-operatively by Students and the Teacher: The teacher and the students plan the activities cooperatively what needs to be done? And how, first of all objectives are formulated with the help of the teacher, and then the class students considers means of teaching the objectives e.g. a group has determined to improve the beauty of its own classroom. The class may be divided into small groups so that students can talk with their seat mates. A student from each of these groups report to the total class. There should be ample opportunity to organize for investigating, seeking information, selecting materials, interviewing people and carrying on the activities needed to solve the problem, in each of these steps the students take part in making decisions and they assume full responsibility for it. Here the teacher is guide in the process of learning, he guide the students how to select group leaders and how to make intelligent decisions. Most important is the quality of thinking that goes in the group. There is a given and take of ideas in the group. The opinions of different students in the group are evaluated by the students to select the best idea of all. It is really a laboratory for learning group processes. Problem solving is the Dominant Method of Activity Curriculum: In the activity curriculum, the teaching learning process consists largely of problem solving. In the pursuit of interests in the groups to complete an activity various difficulties will arise. The teacher and his students are to find ways of overcoming these obstacles. As the interests of children lead to problems requiring a great diversity of content so the subject matter from almost every field of life. Knowledge is used in the activity curriculum. But the subject matter is studied as a means of solving problems and not as subject. The Teacher Assists the Group as a Resource Person: Here the teacher works as a guide and resource person. He serves to small groups, to individual students. He sometimes leads the discussion to help the students to analyses the problem. He works with them in improving their skills. He is a part of the total learning situation rather than task master. Practice and Individual Assistance are provided as needed: In activity curriculum the need for practice grows out of the learning situation. As the students show the need for working on spellings of certain words, or grammar, the teacher gives them the opportunity to learn and practice these skills. If the students ask the teacher to help them in writing a letter to invite a speaker, the teacher will not write the letter for them, but he will guide them. He will work with them on the use of words and thus he will encourage them to write a letter inviting the guest speaker.

Requirements for Optimum Operation of Activity Curriculum:

Training of Teachers:
Teachers should have a broad general education with specialized training in child and adolescent development, guidance and methods of teaching.

Physical Features of the School: Activity base curriculum needs spacious Building, grounds and classrooms to permit as many activities as possible. Will light rooms and have ample facilities; for displaying and decorations devised by children. The ample use of school grounds in addition to outdoor class work and for other countless outdoor activities in which children may engage as they follow their interests. To complete these possibilities the school will require several times more space then they have now. Tentatively ten acres of land (one acre= 4940 sq. yards) would likely be the minimum to meet the needs of an activity curriculum. To those critics who criticize the activity curriculum as the most expensive pattern of curriculum organization, the advocates of an activity programme will give a reply that there is no such thing as “a good cheap education:.

6) Teacher-Centered Curriculum:
Teachers participate in a variety of curriculum activities at classroom level. These are the very core of their daily teaching tasks and include such activities as selection of specific content, selection of teaching approach, use of audio-visual aids and so on. In recent years teachers have become increasingly involved in a broader level of curriculum decision-making such as involvement in major curriculum projects. It mostly involves few teachers, although some teachers participate in syllabus committees. At the school level, however, staff members are becoming more responsible for a vast array of curriculum decision.

In countries where they have adopted teacher centered curriculum the schools have considerably greater responsibility for curriculum development. In these schools teachers have become involved, willingly or unwillingly, in more school-level curriculum decision-making. Regardless of the state in which one teaches, it has become obvious in recent years that all teachers are participating more in curriculum decision-making at the school level. The nature of this participation may be seen in the various roles that teachers adopt in the decision-making process. It is suggested that teachers may participate in any combination of curriculum decision-making roles at the school level:

- Implementers
- Adapters
- Developer
- Researchers

Implementers: As an ‘implementer’ or ‘receiver’, the teacher’s role is to apply the developed curriculum. In this role the teacher has a minimum of responsibility and
involvement in the curriculum development phase of the curriculum process, though he has a significant role in the application phase of this process.

**Adapters:** As an adapter, the role of the teacher is just the same as implementer. This is somewhat conceptual term which indicates that the teachers become ready to accept the curriculum in order to implement it.

As a developer, the teacher’s role is to take part in the curriculum development process. In Pakistan, some representative teachers are being invited to attend various meetings held by the higher authorities in order to make contributions in the curriculum development or curriculum evaluation process.

**Researchers:** Curriculum is a dynamic process. Keeping in view this characteristic, there is a need to conduct research in order to bring about desirable changes in the curriculum. Teachers in most of the countries and also in Pakistan are taking part in various types of researches in curriculum development process. The nature of these researches is.

- To review the curriculum.
- To evaluate the curriculum.
- To change the curriculum etc.

**Advantages of Teacher’s centered Approach:**

- As the curriculum is designed by the teacher, it become easy to achieve the desired goals.
- Subject matter become psychologically sound due to its relevance with interests, needs and level of the children.
- Content/Subject matter is logically arranged.
- Irrelevant material/Subject matter is avoided.
- Teachers feel comfortable and confident in the classroom activities.
- Democracy is encouraged.
- Co-operation is developed.
- Society/Community is also involved (directly or indirectly) in the development of curriculum.
- No objection is raised by the teacher in connection with the availability of sources and resources.

**Limitations:**

If this approach is followed in Pakistan then the following limitations may hinder the process.
• A change in the attitude on the part of learners, teachers and community is difficult to develop.
• Lack of sources and resources.
• Hindrance due to rigid administration, planning and management.
• It will become difficult to maintain a common standard in various institutions.
• The existing curriculum for the teaching training institutions is not suitable for the teacher centered approach.
• A drastic change in the examination system/evaluation will be required.

7) INTEGRATED CURRICULUM
What exactly is integrated curriculum? In its simplest conception, it is about making connections. What kind of connections? Across disciplines? To real life? Are the connections skill-based or knowledge-based?
• Correlation may be as slight as casual attention to related materials in other subject areas . . . a bit more intense when teachers plan it to make the materials of one subject interpret the problems or topics of another
Integration: the unification of all subjects and experiences.
Arguments for supporting integrated curriculum
There are two strong arguments supporting an integrated curriculum. First, there is simply too much information to be covered in the traditional structure of a forty or fifty minute class period. Secondly, most subjects are taught to students in isolation from other related information. Advocates of an interconnected curriculum believe that individuals learn best when encountering ideas that are connected to one another. A strong belief system exists supporting that "all things are connected."
What do the critics say?
Critics of integrated curriculum have formulated several arguments against the idea;
➢ First, it is sometimes appropriate for information to be taught within the content area. Some concepts run the risk of becoming confused when connected to unrelated subject matter.
➢ Secondly, most teachers have always been a part of a somewhat modernist method of teaching. Therefore, implementing integrated curriculum becomes increasingly more difficult.
➢ Third, critics claim that many teachers may lack knowledge and skills of the various disciplines.
➢ Finally, a key criticism of integrated curriculum is assessment. Schools continue to struggle with effective methods to assess student achievement in regard to higher
level thinking and deeper understanding. In order for integrated curriculum to replace
traditional teaching styles, the entire structure of the school needs to be change.
Frankly, this is a change that many modernist teachers are not willing to accept.

- The integrated curriculum approach is successful in making students more aware of
  content area connections, challenging students, providing a learning environment,
  supporting academic and social needs, dissolving the boundaries among the
disciplines, and fostering stronger student/teacher relationships.

- Components of Integrated Curriculum
  - Focuses on basic skills, content and higher level thinking
  - Encourages lifelong learning
  - Structures learning around themes, big ideas and meaningful concepts
  - Provides connections among various curricular disciplines
  - Provides learners opportunities to apply skills they have learned
  - Encourages active participation in relevant real-life experiences
  - Curiosity, motivates, and challenges learners
  - Provides a deeper understanding of content
  - Offers opportunities for more small
  - Accommodates a variety of learning styles/theories (i.e., social learning theory,
    cooperative learning, intrinsic motivation, and self-efficacy) and multiple
  intelligences

The organization of integrated curriculum is a post second world war occurrence. This
phenomenon gain greatest support in the 1960s. Based on the essential organization of
content, as in the subject design, the academic disciplines design emphasizes on the role
played by those diverse entities called academic disciplines. Thus it is clearly defined in
terms of knowledge, skills and values.

8) Correlated Curriculum

The words correlation and interrelation mean practically the same thing. Correlation is the
recognition and establishment of relationships among the various subject areas or fields.
Sometimes the term correlation is used to indicate planning a proper sequence of experiences
in one subject field; for instance, in planning relationships between 7th-grade National
Language and 8th-grade National Language. A better term for that is articulation, and it is of
course essential in every subject field under any type of curriculum organization, since pupil
experiences must follow a psychologically determined sequence. Correlation refers to
horizontal relationships—relationships on the same grade level between two subjects, or
among all the subjects. One may correlate English with Music, Mathematics, History, and
other subjects. Teachers of Japanese Language and English Language in the first year of the lower secondary school may attempt to correlate their work to some degree, as they teach *Romaji* by taking up certain fundamental questions of writing and punctuation. Another illustration may be found in the attempt to correlate the material and activities in logic and English in the upper secondary school classes. Correlation, in short, is our first logical step toward relating classroom activities and topics to real life. The big handicap in Japan to the development of this method has been the retention of too rigid subject matter division.

The necessity for correlation is implied in the present arrangement of subjects. This arrangement, or any other arrangement, was brought about because of the necessity of organizing the curriculum, not because there is a natural or inevitable way to divide pupil experiences among subjects. Subject organization might be regarded as described below.

The secondary schools have certain major aims. In order to achieve these aims pupils should be provided an opportunity to engage in certain planned experiences, designed specifically to achieve the aims. Let us assume that the three major aims of the secondary schools are:

1. To discover the needs, interests, and capacities of each individual, and on that basis to seek to develop the individuality of the pupil to the maximum degree
2. To develop the individual as a desirable social being and a good citizen of the home, school, community, prefecture, nation, and the world
3. To discover vocational needs, interests, and aptitudes, do assist the pupil in a wise choice based on these needs, interests, and aptitudes, and to help him prepare for the vocation of his choice

Now suppose we broke each of these major aims down into several hundred smaller and more manageable aims. The next step would be to list all of the experiences that would help in the achievement of the aims. After listing the hundreds or thousands of experiences, and trying to classify them, we would find that some could be conveniently grouped together and called Mathematics. Others would be so closely related that we might group them together and call them Science. Others we could group loosely together and classify as National Language, still others as English Language. But we would find, in trying to assign experiences to one field or another, that there would be great overlapping. We would often be troubled about whether to assign one certain experience to Science or to Social Studies. If we were to go through this detailed experience, as many educators have, we should find that the divisions between subject areas are artificial, and that in many hundreds of instances there are no clear criteria as to which subject field a certain experience should be assigned to. We should find that the boundaries between subject fields are in fact very slight, and we should decide that in order to be sure that pupils had all of the experiences considered necessary, we should have to assign some types of experiences to several different subject areas. What this
means, in effect, is that there can be no rigid inflexible boundaries between subjects. Education will be more realistic if, in each subject, the borderlines between it and other subject are considered very flexible, so that pupils' experiences in accordance with their needs can be planned without undue attention being paid to whether or not the territory of another field has been invaded. The implications of this philosophy for English language curriculum are that materials for English should be drawn from whatever fields that seem necessary. In other words, English language textbooks and other curriculum materials may draw upon stories, poems, essays, articles, and other types of presentations from History, Social Studies, Science, Art, Music, or any other field.

Correlation implies, indeed makes it essential, that teachers must work closely together to plan pupil experiences designed to achieve the major aims of education. English language teachers cannot set themselves apart, as a distinct group, but must know what their pupils are doing in all of the other fields of study. In order to secure really effective correlation, it is necessary to provide a free period each day during which teachers may meet together to discuss the work their classes have done, to plan and prepare future project, and to plan correlation in every aspect of their teaching.

UNIT VII
CURRICULUM EVALUATION
Process of Evaluation
Types of Evaluation (Formative, Summative, And Diagnostic.
Measurement Instruments (Interview, Questionnaire, Observation) Types, merits and Demerits

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.

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. 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. 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. 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 behavioural stated objectives

The process of defining, obtaining and using relevant information for decision-making purposes.
Objectives Curriculum Evaluation
Evaluation of curriculum is an integral and essential part of the whole process of curriculum development. It is a continuous activity and not a ‘tail-end-experience’. Evaluation and planning are complementary processes that occur almost simultaneously and continuously. Planning is made on the basis of evaluation and vice-versa. However, as a separate state, evaluation has its own entity. The importance of curriculum evaluation is to determine the value of the curriculum itself is 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 the 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

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 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 a 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 | Types of Evaluation**

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.

**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 experience.

iii. Behavioural 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.

CRITERIA FOR CURRICULUM EVALUATION
There are four major criteria for assessing the workability of the curriculum.
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.
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.
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.

**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.

**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.

**Interview** is a face-to-face, observation and personnel appraisal method of evaluating the applicant where the interviewer who is higher in status is in a dominant role. If there were no differences of status and roles, it would be a meeting. Two interviews—preliminary and final—generally occur during the selection process.

**Kinds of Interview**

Interviews may be classified under seven main categories, depending on their methods:

1. **The direct planned interview:** The interviewer, however, does some advance planning. For example, he works out in his mind, if not on paper, what he hopes to accomplish, what kind of information he is to seek or give, how he will conduct the interview and how much time he will allot to a candidate.

2. **The direct non-directive interview:** In this type of interview the interviewer refrains from asking direct and specific questions but creates an atmosphere in which the interviewer feels free to talk and go into any subject he considers important. In such an atmosphere the information obtained by the interviewer is more likely to be an accurate representation of what the individual believes than if the employee is asked specified questions. The object of the interview is to determine what the individual himself considers of immediate concern, what he thinks about these problems, and how he conceives of his job and his organisation. The interviewer, therefore, plays mainly a hastening role. He has to avoid expressing value judgments, interrupting the applicant, and revealing his own attitudes and opinions. This
types of interview is often used in situations other than hiring, such as counseling, processing of grievances, and exit interviews. The difficulties of this type of interview keep many companies from using it. It requires a highly trained interviewer. It also requires more time than other methods. The advantage of this method is that the applicant tends to be more at ease, because he does not need to be so concerned about the right answers. There is usually no “right answer” to the non-directive questions.

(3) The patterned interview: In this interview a series of questions which can illuminate the strategic parts of the applicant’s background are standardised in advance and validated against the record of employees who have succeeded or failed on the job. Answers to these questions are compared with a critical score and used in determining who is to be selected. In the interview process these standard questions are asked as they are written; the order may be varied but not the phrasing of the questions.

(4) The stress interview: In this interview the interviewer deliberately creates stress to see how an applicant operates under it. To induce the stress, the interviewer responds to the applicant’s answers with anger, silence, criticism or a flurry of incisive follow-up questions. Events such as noise, interruptions, or change of schedules are introduced to see how determined and inventive an applicant can be. For sales candidates, the interviewer may play the part of a customer and have the applicant try to sell him some well-known products like soap, a blade, or a fan. The interviewer can add realism by acting uncooperatively and by raising objections.

(5) The systematic depth interview: In this interview the interviewer has a plan of areas he wishes to cover. Ordinarily, the interviewer exhausts one area before launching into the next so that he can be more certain of complete coverage. In this type of interview, an answer to any one question does not tell much about the applicant and in fact be misleading. Each answer must be interpreted in the context of many other interrelated circumstances. So the interviewer must weigh the meaning of various answers.

(6) Panel or board interview: In the board interview, more than one person interviews an applicant at the same time. Areas of questioning are allocated to each interviewer before the interview starts. One possible disadvantage of this method is that on being stimulated by each other’s questioning, interviews may start competing with one another and thus create conditions of stress for the candidate.
Group interview: In this interview 5 or 6 applicants are placed together in a situation in which they must interact. The situation may be structured or unstructured. It is usual for the selector to remain silent throughout the discussion and make notes of the applicant’s interactions unobtrusively. The applicant who verbalizes better and who has a better personality is likely to be selected under such circumstances. Sometimes the applicants and the selectors may live together for a few days thus providing a chance to the selectors to know about the personal idiosyncrasies of applicants better. This is known as the “house part” technique.

Procedure for an Interview:

Following steps are generally involved in an interview procedure:

1. Reviewing background information: Pertinent information about the candidate should be collected and noted beforehand. This preparation saves time and mental effort during the interview and enables the interviewer to sketch in advance at least a general picture of a candidate.

2. Preparing a question plan: Every interview should have a question plan. It is useful for inexperienced interviewers to have this written down in front of them so that questions can be ticked off as they are dealt with. The National Institute of Industrial Psychology (Great Britain) provides a point plan for this purpose covering physical make-up/ education and occupational attainments, basic intelligence, special aptitudes, intellectual and social interests, nature and domestic and social background.

3. Creating a helpful setting: Most interviews have overtones of emotional stress for the applicant. Success in interviewing depends on reducing this stress. This can be achieved if the following conditions are present at the place of interview: privacy and comfort, atmosphere of leisure, freedom from interruptions, authentic feeling for and interest in the candidate.

4. Conducting the interview: Interviewing is much like fishing, where it is often necessary to change depth, lure and location in order to get a bite. It is, therefore, necessary to use a number of different approaches during the course of an interview.

5. Concluding the interview: In the final few moments, the interviewer guides the interview to a close. After the candidate leaves, the interviewer looks over his notes, recalls his impressions, collates his observation and makes a provisional appraisal before seeing the next
candidate. He fills up the interviewer’s Rating Sheet meant for this purpose. A well-drafted rating sheet forces the interviewer to think carefully on various factors relevant to the job, for example, the Rating Sheet used by the J.K. Synthetics Ltd. In this sheet the interviewer is required to evaluate the candidate on six traits relevant to the job. The form provides for the rating to be noted down in A, B, C, D for each trait; it is also given. In that case the interviewer is required to note down his ratings in terms of this numerical equivalence. The scores against all traits are finally totaled.

**Merits and Demerits of Interviewing:**

Interviewing has two big advantages over other methods. These are as follows:

(a) It can fill information gaps and can correct questionable responses.

(b) It can effectively bring out the behavioural characteristics of the applicant. The interviewer can easily find out whether the applicant is likely to get along with others in the organization or not, where can his talents be utilized most effectively, and so on. The most serious limitations of interviewing are the interviewer’s bias and his pseudo-scientific premises. Because of the interviewer's bias a misfit may be hired and a qualified candidate may be rejected. The interviewer may match “men and prejudices” instead of “men and jobs”. Closely allied to have are most of the premises of such pseudo-sciences as graphology, physiognomy, palmistry, phrenology and astrology. The interviewer may use his knowledge of these subjects in interviewing, thus doing gravest injustice to the candidate. For example, a candidate with a receding forehead may be rejected because the physiognomy categorizes such individual as a criminal.

**Questionnaires**

Questionnaires have been used since the 19th century. Often used as a method for collecting information, questionnaires were first developed in London in 1838. Questionnaires are usually used for collecting data from the respondents through a series of questions and other prompts set by the organization conducting such experiment. Questionnaires are not necessarily statistical data, but they do act as an effective alternative for surveys, since they are cheap and can be widely used to reach within people in a short period of time. These are usually used to get a standardized answer rather than a specific answer seen in other questionnaire types of statistical data collection.
Types of Questionnaires:

Based on the type of questions used, questionnaires are as follows:

1. Structured questionnaire: Comes under quantitative research. It includes the low number
of researchers and the high number of respondents. They are also called as closed
questionnaires. They usually include answers such as very bad, bad, good, very good and so
on.

• They have a definite and concrete questions
• They have to be prepared well in advance so as to ask as much questions and receive
info from the respondent.
• A formal inquiry is initiated.
• Supplements and checks the previously accumulated data.
• Commonly used in for social and economic problems, to study about the changes
caused due to change in policies, laws etc.
These question come sunder structured questionnaire.

Contingency questions: This comes under structured questionnaire. Here a question is asked
only if the respondent is able to give a answer to the previous question.

Matrix questions: Similar kind of options are provided to multiple questions. The questions
are provided one under the other, forming a matrix with response categories on top and
questions down the side

2. Unstructured questionnaire: A version of qualitative survey. They are usually based
around more open questions. Open questions also means recording more data as the
respondents can point out what is important for them, in their own words and methods. But it
is more difficult from the researcher’s side, since it does not give the correct idea of the topic
and moreover proper understanding of the data is needed.

• Usually used at the time of an interview.
• Doesn’t require much planning and time.
• More flexible for applying in many areas.
• Usually used to collect data about people and their personal info such as family, debates, beliefs etc.

3. **Scaled questionnaires:** The respondents are asked to scale the answers based on a given rating prescribed by the question. Depending on the type of format used in questionnaires, they are divided into the following.

*Open format questions:* These are the type of questions that are used to allow the respondents to express their views in a free flowing manner. By using such questions, the respondents do not have to follow the criteria for answering questions and he/she can truly express their beliefs and suggestions.

An ideal questionnaire is types of questionnaires that includes open ended questions and also have feedback and suggestions for future improvements.

*Closed format questions:* Multiple choice questions come under this category. The user is restricted to answer their opinions through the options that are set by the surveyor. Hence, these are also called as close ended questions. One of the main advantages of using closed ended questions is the ease of doing preliminary analysis. These are usually used to find opinion about known questions and answers. They are usually used to track the status and the improvements of organizations and companies.

Closed ended questions are of various types:

1. **Leading questions:** These type of questions force a definite type of answer from the audience. In such a question, all kind of answers are equally likely. The answers can vary from bad, very bad to good and very good. These are usually used to collect information from the users in very limited words.

2. **Importance questions:** The respondents are asked to take a rating for a certain type of issue on a scale of 1 to 5. This shows how much of an importance does the questionnaire topics really hold within the company or within the minds of the user.

3. **Likert questions:** These questions show how much the customer agrees to a certain topic and how much it impacts the respondent.

4. **Dichotomous questions:** These questions ask the respondents only a yes or no answer. Hence, it makes it difficult to analyze beyond the yes and no answer.
5. Bipolar questions: Such questions have answers that are in the extreme case. The respondents are required to ask to rate the question between these two extremities.

6. Rating scale questions: In such questions, the respondents are asked to rate a particular issue between the ratings of good and bad. Such questions have even number of choices, so as to prevent selecting the middle option all the time.

7. Buying propensity questions: These questions are used to rate whether the respondent will again use the service or the product in the future.

4. Hand Delivered Questionnaire: This type of questionnaire is also called as direct questionnaire where the researcher directly goes to the respondent and shares the questions. The respondent needs to tick the right answers in front of the researcher.

Advantages:

- In this type the researcher will have close relationship with the respondents.
- Tough questions are explained by the researcher if the respondents want.
- The reason to study is also described

Disadvantages:

- Expensive
- Time consuming.

5. Mailed Questionnaire: This type of questionnaire is mainly used by most of the researchers. Here the respondents would be living somewhere far and the questionnaire is send to him by post. Along with the questions, a set of instruction list is also send to him. The respondent need to write the answers and send it back to the respective person or agency.

Advantages:

- Most commonly used
- Very helpful for the researcher.
- Time saving
• Easy and simple.

• Not at all expensive

Disadvantages:

• Lack of returns.

• Time taking if respondents are careless and lazy.

• Scarcity of skilled respondents.

• Chances of Errors due to misunderstanding by respondents.

6. Mixed questionnaire:

• Comprises of both close and open type of questions.

• Most used in social research sector.

7. Pictorial questionnaire:

• It is not used regularly.

• Usage of pictures impacts the respondents in answering the questions

• Mostly used for the studies based on social attitudes and prejudices in children

Advantages of Questionnaires:

1. Questionnaires are really inexpensive when they are handled properly. They can be cheaper than taking surveys which requires a lot of time and money.

2. Questionnaires can be of different types, written, postal, telephone and many other methods.

3. A single question or a topic can be asked to many at the same time without any kind of delay. Unlike surveys they don’t have to go to each and everyone to get an opinion.

4. It is an effective method to get an opinion from a large number of people.

5. Large number of respondents can be possible varying in age, sex, occupation etc.
6. Question responses can be highly defined and specific, depending upon the type of questions asked in the questionnaire.

7. These results can also be included as statistical survey, the deciding factor is the nature of the questionnaire and on what topic was the questionnaire based on.

8. Unlike face to face surveys where the respondent has to answer within that moment itself, questionnaires gives time to the respondents to think carefully, before giving the answers.

9. Questionnaires are easily replicable and can be repeated, and if well-constructed and properly piloted, they can be used as comparative materials for future studies and projects.

10. Standardized questionnaires can already be validated and can be used to compare between works and studies.

11. They are easy to administer and manage.

12. These type of data collection are common among all kinds of professions including teaching and book keeping. Questionnaires have become a part of our daily lives.

13. The format for most type of questionnaires are common to the common people irrespective of the status.

14. The most important part in a preliminary survey. Usually taken as a step to collect important data such as feedback, suggestions and constructive criticisms.

15. Questionnaires are usually straightforward in their approach which makes them easier to analyze and compare with the ideal answers.

16. Questionnaires provide a lot for data analysis and data manipulation. The more the data that is received, the more accurate will be the analysis.

17. Questionnaires allow people to answer questions when they feel it is convenient. Thus, it is more applicable than face to face surveys where people are expected to immediately reply to the question.

18. If anonymous, more honest answers can be expected from the people being surveyed.

19. Questionnaires can reduce a lot of bias. Since, all the respondents are answering the same number and the same type of questions.
20. Used for getting answers from a large group of people from a short space of time.

Disadvantages of Questionnaires:

1. The results for questionnaires are based only on the type of question being asked. If the questions are poorly worded or are biased in nature, then the result analysed will also be of the same nature.

2. Questionnaires can pose difficulties to the analyst if he/she is not familiar with the system based on which the questions are being asked. That is, the analyst may not be able to produce the required questions, and hence the required results cannot be achieved.

3. Questionnaires tend to give an alien feeling to many respondents and hence they are very impersonal irrespective of the situation. Thus, many people do prefer face to face conversations than answering questionnaires.

4. The response rate maybe poor in questionnaires, if people do not have time or they don’t feel any importance in answering them. This is one of the main disadvantages of questionnaires.

5. Questionnaires do make it impossible for people to answer questions according to their own opinion. This makes them very constricted in terms of answering such questions. This feels true particularly when the questionnaires have closed end questions. They limit the opinions of the respondent by a huge factor. Hence, less honest and detailed answers can be received.

6. Some participants may forget about the whole issue and tend to forget why such questionnaire was present in the first place.

7. Open ended questions may take a long time and will produce a large amount of data that will take time to analyze.

8. Respondents may answer the questionnaire superficially, if it takes time to answer such questions. This might lead to inadequate and maybe unwanted data to analyze the final result.

9. Do not try to ask too many question since it might bore the respondent and ultimately it will lead to incorrect answers.
10. Try to make the questionnaire as anonymous as possible as it will be more beneficial for the respondent to explain their opinions in detail.

11. Try to state the respondents for what purpose is the survey being taken and how the questionnaire will be beneficial in the overall process.

12. For a more fruitful approach, try to make sure that the questionnaire is applicable to individuals who are willing to answer and are ready to give a valid answer.

13. If any doubts in the answers, the analyst cannot trace back to the respondents since most of the questionnaires are usually anonymous in nature.

14. Questionnaires can also give the respondents freedom to lie, hence resulting in vague answers or opinions that is distant from the main issue.

15. If not administered face to face, that is through telephone or such incentives, questionnaires can have low response rates.

16. Questionnaires do not explain the questions to the respondents which might lead to misinterpreted answers and facts.

17. Questionnaires cannot inform about the real meaning and fact of why such data is collected. Hence, this means that the respondents do not feel obligated to answer such questionnaires truthfully and specifically. This leads to misinterpretation of data.

18. People can feel biased to certain questions in a questionnaire. This may be due to the fact that the respondent may be penalized when answering such questions truthfully.

19. Questionnaires provide very less stability with the response processes in taking a survey.

20. Questionnaires may not be suitable for certain people. It may not be suitable for illiterates or people who have reading problems.

21. Especially from postal questionnaires, it might be difficult to obtain a certain number of answers within a limited period of time.

22. Respondents may ignore certain questions without giving a proper answer.

23. Questionnaires can be incorrectly filled.
24. They are not suitable for collecting and taking information about long and complex issues.

25. Because of the ambiguous language used, it might be a bit confusing for the respondent to answer such questions.

26. More than 90% of the questions are in printed or in visual format in a written questionnaire. Gestures or other visual clues are not present. This can cause problems to which the questionnaire is being requested to.

27. Too many frequent questionnaires can cause fatigue among the respondent group and can cause misuse of questionnaires and related surveys.

28. Try to have a simple and intuitive questionnaire format. For example, try to line up response boxes on the right side of the questionnaire so that it is easy for the respondent to mark the options.

29. Try to use easy and understandable vocabulary so that the questionnaire can be understood by all groups of people.

30. Try to make the instructions to the respondents as clear as possible.

**Observation:** Observation may take place in the natural or real life setting or in a laboratory. Observational procedures tend to vary from complete flexibility to the use of pre-coded detailed formal instrument. The observer may himself participate actively in the group he is observing or he may be an observer from outside or his presence may be unknown to the people he is observing.

We may thus classify scientific observation broadly, on three bases, as follows:

1) Controlled/uncontrolled observation.

2) Structured/unstructured/partially structured observation.

3) Participant/non-participant/disguised observation.

The type of observational technique to be chosen in a particular study depends on the purpose of the study. In an exploratory study, the observational procedure is most likely to be relatively unstructured and the observer is also more likely to participate in group activity. On
the other hand, for studies of the descriptive or experimental type, the observational procedures are more likely to be relatively structured and involve a minimum of participation on the part of the observer. It should be noted, however, that the degree of structuredness and the degree of participation need not be together. For example, the researcher in an exploratory study may be a participant observer or a non-participant or a disguised observer. A particular research situation may demand the coupling of participant observation with a highly structured observational instrument. The investigator, whatever be the purpose of his study, should advisedly answer four broad questions before setting out to observe, i.e., he must be sure about:

(i) What should be observed,

(ii) How the observation should be recorded,

(iii) How to ensure accuracy of observation, and

(iv) What relationship should obtain between the observer and observed and, how the desired relationship should be established.

The questions cannot be answered uniformly since the above decisions depend on the nature of the study and the extent to which observational procedures can be structured. Let us now discuss the major types of observational procedures. One of the most useful bases for classification of observational procedures is the degree of structuredness. Accordingly, we get two ideal-typical observational procedures:

(1) **Unstructured**, and

(2) **Structured**.

It will be helpful to bear in mind that in actual practice, there are degrees of structuredness, i.e., structuredness and un-structuredness constitute a continuum rather than a sharp cut and dried distinction between the structured and unstructured types of observation.

(1) **Unstructured Observation**: The unstructured observation is diametrically opposed to the structured observation in its ideal-typical formulation. The structured observation is characterized by a careful definition of the units to be observed, information to be recorded, the selection of pertinent data for observation and standardization of conditions of
observation. The unstructured observation represents ideally a contrasting situation in respect of all these.

(a) What should be observed? In highly-structured studies, the well-formulated research-problem or hypotheses clearly point to what data will be most relevant. But in exploratory studies the observer does not know in advance which aspects of the situation will prove relevant. Since unstructured observation is mostly used as an exploratory technique the observer’s understanding of the situation is likely to change as he goes along. This, in turn, may call for changes in what he observes. It should be noted that such changes called for in the foci of observation are often desirable. Such shifts in focus according to the exigencies of the situation is a characteristic of unstructured observation. That is, the unstructured observation is flexible, it allows for changes in focus from time to time if and when reasonable clues or doubts warrant such changes with a view to facilitate taking stock of the new observational items that appear to be pertinent or important at different points in time. The observer is always prepared to draw his clues from unanticipated events in an attitude of alert receptivity. While no stringent criteria or hard and fast rules can be laid down as to how the observer will go about observing a particular situation it would be helpful, however, to indicate some of the significant aspects that the observer can overlook only at his peril.

(1) The observer should see who the participants are, how many they are and how they are related to one another.

(2) The observer should understand the ‘setting.’ He should know in addition to its overt appearance, the kinds of behaviour it encourages, discourages or prevents and its social characteristics.

(3) The observer should also understand the purpose which has brought the subject-participants together, the nature of the purpose and how the goals of participants are related.

(4) The observer must also understand what the participants do, how, with whom and with what they do it. For example, the observer should know what stimulus initiated the behaviour, what the goal is towards which the behaviour is directed, what are the qualities of the behaviour (duration, intensity, etc.) and what are it consequences? It should be noted that in a practical situation, it is often not possible to obtain enough clues to allow such a comprehensive description. It may also be that the course of events is too fluid to permit consideration of all dimensions of a social situation or that a certain aspect of an occurrence may be so important as to need the entire attention of the observer.
(b) Recording an observation involves two major considerations, viz:

(i) When should the notes be taken, and
(ii) How the notes should be kept.

The best time for recording is on the spot and during the event. This results in minimizing selective bias and distortions of memory. There are, however, many situations in which note taking on the spot is not feasible because this is likely to affect the naturalness of the situation and create suspicions in minds of the persons being observed. Constant note taking may also affect the quality of observation, as the observer has to divide his attention between observing and writing. In consequence, during the process, the relevant aspects of the situation may be lost to the eye. In a situation where on the spot detailed note taking is not possible, the memory of the observer may be too heavily taxed if recording is postponed to the expiry of an observational period. In certain situations, it may also help if the observer retires from an on-going situation for a few minutes every hour to make more detailed notes. It is important that the observer should pen down as soon as possible, after the period of observation, a complete account of everything important in the situation. The facility of recording improves if the observer evolved some kind of indexing system.

(c) Ensuring the accuracy of observation is another important concern of the observer. In situations where for some reasons, immediate recording is not possible, he is likely to find that by the time he sits down to write his observations; his memory does not accurately feed in the relevant details. In order to check the accuracy and completeness of the record, the observer should, if feasible, compare it with a record made by a tape recording equipment. Of course, this is not always feasible; besides, tape recording captures only the auditory stimuli in the situation. The next best solution is to have two or more people observe the same event. They can later compare their notes and check bias. This is an excellent way to discover one’s blind spots. Two observations may be qualitatively different; against this, two observers from different backgrounds may be employed to observe the same situation. This is understandably a limited remedy. It happens quite often that the observer injects an overdose of interpretation into his records. This may adversely affect the validity and reliability of his conclusions. One way out of this is to have two observers record the same vent using the same system. A subsequent comparison, between their records may go some way in detecting the intrusion of interpretation. The participant observer, by virtue of his typical position, faces formidable difficulties in maintaining baselessness. Such an observer may get involved emotionally with some of the people he is studying. This affects his objectivity. To gain access to intimate
data, the observer may allow himself to be absorbed into particular situation he is studying. But this very factor may make him to accept uncritically the behaviour that he should be trying to explain. This problem can be met mainly by the observer becoming aware of his proneness or tendency to take things for granted. An outsider serving as a check may bring home to the observer his blind spot. It is also possible to detect blind spots by breaking up or dissecting the perceptual field so the factors that lead it to be seen in a particular way lose much of their force. In other words, by approaching the situation in an analytical way the observer may be able to lessen the distorting influence of certain factors that are likely to lead to bias. The natural way of seeing the situation is to see the action as one centred around the principal actors. But an inconspicuous person, seemingly very insignificant in the situation, or sometimes even a dead person, may be the real center of the situation (e.g., in ceremonies dealing with the propitiation of the soul of a dead person). An effective screw to control accuracy in observation and interpretations is for the investigator to establish a sort of relationship with the subjects which makes it possible for him to take them into his confidence about the research. A participant observer’s situation is likely to create inner conflicts within the investigator. This, in turn, may interfere with objectivity. Should the group being observed be undergoing an emergency of some kind, there is indeed a strong pressure on the observer to become an active participant. He may have to abandon at least temporarily, his detached position as an observer. But if he does enter into the center of activities of the group, he risks the danger of losing his identity as a scientist. Thus, the participant observer is in a dilemma; resulting either way, in the loss of objectivity. Rosenfeld suggests that bias arising from inner conflicts may be minimized if one is aware of the conflicts and of the nature of one’s defence. The final issue relates to the relationship between the observer and the observed. In field observation faulty approach vis-a-vis the subjects may have consequences for the inquiry. Since the method is applied in the actual life-sphere of the persons, the observer’s mistakes cannot remain insulated incidents. The observer must decide before he approaches the potential subjects, whether to reveal the facts that he is a researcher or to enter the situation under some other guise. There are advantages as also disadvantages in both these approaches. It may for certain reasons seem preferable to make known to the subjects his real role as the researcher. This approach is relatively simple compared to disguised observation. Secondly, it increases substantially one’s opportunity to get information which he would get only very indirectly were he to approach them in disguise. Thirdly, the open declaration approach does not hold the possibility that his activity will harm any of the people in the situation whereas the disguised observer must consider this possibility seriously. The obvious disadvantage of a direct approach is that this may make the subjects conscious only to the detriment of naturalness of behaviour the observer wants to
observe. The researcher therefore has to weigh carefully the relative gains and losses of these two approaches before employing any one. Sometimes, there is no alternative to disguised observation. M. Sherif and C. Sherif have reported that the gang-activities of the boys in a summer camp could only be observed by the researcher in the guise of a labourer on the camp grounds. Similarly, in the study of socio-psychological effects of long-term unemployment in an Austrian Village, disguised observation (research workers presenting themselves as members of voluntary welfare group) was used with advantage. Entrance into a community requires a very careful staging. If there are many more than two sides to be approached simultaneously, the issue becomes all the more tricky. The observer must be prepared to provide a convincing reason for his presence in the community. It may sometimes be advisable to let influential persons in the community handle the explanation of the investigator’s work. The observer then must decide upon the degree of his participation in the community, ranging from the bare minimum of answering when addressed, to engaging in some major activity concerning the community life.

2. Structured Observation: Structured observation consists in a careful definition of categories under which the information is to be recorded, standardization of conditions of observation, and is used mostly in studies designed to provide systematic description or to test causal hypothesis. The use of structured observational technique presupposes that the investigator knows what aspects of the situation under study are relevant to his research purposes and is in a position therefore to develop a specific plan for making and recording observations before he actually begins the collection of data. Structured observation may be employed in the natural field-setting or a laboratory-setting. Structured observation, in so far as it is used mainly in studies starting with relatively specific formulation, normally allows for much less freedom of choice with respect to the content of observation than is allowed in unstructured observation. Since the situation and the problem are already explicit, the observer is in a position to set up in advance the categories in terms of which he will analyse the situation. The categories are clearly defined to provide reliable data on the questions to be asked. Of course, such a definition of categories is the end-product of the researcher’s efforts at trying to solve specific coding problems. To start with, the researcher may be faced with a large number of categories. It is important that the researcher decides upon an appropriate frame of reference for categorization and trains observers accordingly. R. E. Bales has developed a procedural system of categories for recording group interaction. He has proposed 12 standard behavioural categories applicable to a wide range of group situations. Behaviour of any group member is coded in terms of careful definition of each category. The problem of recording observations during a structured observation. The most commonly used system of
recording is one that provides the observer with a number of duplicate sheets containing the list of categories to be coded. Mechanical recording instruments have been used in some studies. For example, Chapple devised an international chronograph. Helen has developed an audio-introspect meter. Bales and Gerbrands have devised an interactional recorder. All these devices are meant to facilitate recording of observational data according to a specific principle of categorization. Sound recordings and motion pictures have been used when it is necessary to describe the overall nature of an event or to code certain action of a member in terms of a frame of reference provided by the entire event. Of course, each of these has obvious limitations. Although such devices as motion pictures, tape-recording and television may be very helpful in affording an overall view of a social event, their use does not by itself solve the problem of gathering data for systematic purposes. Relevant categories for recording behaviour must be established, time-units decided upon, methods set up for recording as to who initiated an action and who was the target. In sum, if the data are to be useful for research, they must be recorded in terms of such a formal scheme. This problem is effectively tackled by ensuring some kind of standardization in the observational instrument. There are, however, some special problems in achieving reliable and valid observations.

These are as follows:

(1) One problem derives from the inadequate definition of the kinds of behaviour that are to be accepted as corresponding to a given concept. For example, if the concept of adjustment was not operationally defined, different observers may be inclined to regard different kinds of behaviour as empirical referents of the concept.

(2) Another factor that may lower the reliability of even a well-trained and skilled observer is the degree of confidence one must have in one’s judgement before marking a given category. For example, observers may assign the same observational items to different categories because they may themselves manifest different tendencies to perceive evidence of a particular behaviour.

(3) The constant error introduced by the observer because of the distortion of his perceptions (for various reasons) is one of the major sources of unreliability.

(4) The load of work can also hamper reliability. The result of overloading is often that the observer cannot record all relevant data and may unwittingly record some aspects rather inadequately, thus, introducing bias.
Reliability can be increased by careful training of observers. A well-developed observational procedure can be damaged by differences among different observers or by failure to understand the rules for its use. It is necessary, therefore, that a good period of time be devoted to train the observers.

Such a training entails several phases:

(i) Explanation of purposes and theory in the given study,

(ii) Explanation of categories and the rules for their use,

(iii) Purpose of each category for a theoretic scheme, and

(iv) Practice by observer-trainees, discussion on concrete difficulties and reliability-test of observers.

It should be remembered that all this may not always eliminate the constant bias shared by two or more observers. In such a case, the bias can be minimized by same events. Lastly, we need to consider the relation of the observer with the observed. The observer must carefully prepare his entry into situation and make sure that all members of the group are willing to accept him. Since usually the observer is conspicuously engaged in recording behaviour, using timing device and other technical aids, it is barely possible to disguise the fact that he is doing research. Hence, it is all the more important that he obtains the group’s full agreement to the inquiry. The entry of an observer into the group, however unobtrusive, may introduce a new variable into the situation and this may change the behaviour being observed. For example, in a children’s group, the presence of adult observer may have a great distorting influence. It is important that some thought is given to ways in which the observer’s presence may influence the outcome of research and to develop the techniques that would reduce this possibility. On the whole, people seem to get used to observers if the behaviour of the observer convinces the subjects that he means no ill.

**The participant and the non-participant types of observation**

This conceptual typology was introduced to social sciences by Prof. Edward Lindeman. Lindeman was very critical of studies based upon schedules of questions for which the investigator found answers by making inquiries of persons. Lindeman considered as absurd any attempt to avoid bias by posing questions requiring a simple ‘yes’ or ‘no’ reply in a study dealing not only with the ‘what’ of life but also with the ‘why’ and ‘how’ of life. Lindeman
was of the opinion that if one wished to know what the subject was really doing one should watch him and not ask him. Nels Anderson was a intimate participant in the life of ‘Hobos’, on the road, in lodging houses and in their various activities. The tremendous insight which Anderson developed through such an exercise is amply evidenced in his study entitled ‘The Hobo.’ Participant observation has a reference to the observer sharing to a greater or lesser degree the life of the group he is observing. This sharing may be intermittent but active contacts at close proximity do afford an intimate study of persons. W.F. Whyte in the course of his study published as ‘The Street Corner Society’ was intimately associated with the various aspects of the activities of members in Cornerville. Paul Cressey in his study entitled ‘Taxi Dance Hall’ employed the technique of participant observation and his investigators became part of the social world of the Taxi Dance Hall to the extent it was possible. The non-participant observation, in contradistinction, is characterized by a relative lack of participation by the observer in the life of the group that he is observing. In sum, to quote John Madge, “When the heart of the observer is made to beat as the heart of any other member of the group under observation, rather than as that of detached emissary from some distant laboratory, then he has earned the title of participant observer.” In other words, the participant observation is an attempt to put both observer and observed on the same side by making the observer a member of the group so that he can experience what they experience and work within their frame of reference. On the contrary, the non-participant observation involves the espousal by the observer of a detached role of the observer and recorder without any attempt on his part to experience through participation that which the observed experience.

**Merits of Observation:**

In participant observation, the investigator becomes a member of the community being observed by him. The investigator need not carry out exactly the same activities as the subjects, suffice it, if he finds a role in the group which does not disturb the usual patterns of behaviour. Thus, one of the advantages of participant observation is that since the members of the community are unaware of the researcher’s purpose their behaviour is least likely to be affected. Thus, the researcher is enabled to record the “natural” behaviour of the group. Secondly, since the researcher actually participates in the group under observation, he normally has an access to a body of information which could not easily be obtained by merely looking on in a disinterested fashion. He thus obtains a great depth of experience, while he is able to record the actual behaviour of other participants. Since his period of participation may continue for months, the range of materials collected is likely to be much
wider than those gained from a series of quite lengthy interview schedules. Thirdly, in participant observation, the researcher is able to record the context which gives meaning to expressions of opinion surpassing in richness and depth the usual questionnaire. He can also check the truth of statements made by members of the group. Some occurrences are rarely, if ever, accessible to direct observation. Sexual behavior, family crisis and underworld activities, etc., are examples of events that are not amenable to direct observation by an outsider. It is here that the participant observation helps.

**Limitations of Observation:**

Participant observation has certain disadvantages, one being that the investigator who actually becomes a participant happens to narrow his range of experience. He takes on a particular position within a group with a definite clique or friendship circle. He learns and follows a pattern of activity which is characteristic of its members. Hence, many avenues become closed to him. Further, the role he comes to occupy in the group may be important so that he may be instrumental in effecting changes in the group behavior. The position of participant-observer is especially precarious when it comes to maintaining objectivity. The involvement in the situation may lessen the sharpness of observation not only because the investigators identifies himself with his informants but also because he becomes so used to certain kinds of behavior. In certain situations, the physical and emotional endurance as well as the patience of the researcher may be put to an acid test. Even the observation of routine day-to-day occurrences may become difficult in view of the possibility that unforeseeable factors might interfere with the observational task. To the extent that he participates emotionally, the observer comes to lose objectivity which in scientific parlance is his single greatest asset. He may react in anger when he ought to be recording. He may seek prestige or ego-satisfaction within the group rather than observing this behavior in others. His heart may be moved by tragedy but he may forget to record its impact upon his fellow-members. In consequence, he may fail to note these important details which may appear to him so commonplace as not to merit any attention. It is clear that in both, the participant and non-participant types of observation, the problem of observation-control is not solved. To the degree that the investigator becomes a participant his experience becomes unique, peculiarly his own. Thus, any other researcher would not be able to record the same facts. There is thus less standardization of data. In short, his role of observer is handicapped somewhat by his being a participant. Non-participant observation does answer some of these objections. But a purely non-participant observation is difficult. We have standard set of relationships or role patterns for the ‘non-member’ who should be ever present but never participating. Both the
subject-group and the outsider are likely to feel uncomfortable. And, naturally, for many research situations it is almost impossible for the outsider to be a genuine participant in all ways. The sociologist cannot, for example, become a criminal in order to study a criminal gang. Sometimes, it is possible to take part in a great many activities of the group, just to avoid the awkwardness of complete non-participation while taking the role of an observer for other activities. This strategy was employed by Leplay a century ago in his study of European working class families. In certain studies, the investigators have participated as members of the family taking part in games and dances. They nevertheless made clear that their purpose, above anything else, was to gather facts.

**Principal Difficulties in Observations:**

It is necessary to recognize pertinently the obstacles to impartial observation. The first social scientist to list and discuss these intrinsic difficulties was Herbert Spencer. Spencer pointed out that many social phenomena, unlike the bulk of natural phenomena, are not directly perceptible, but often have to be established by putting together many details which are naturally dispersed in space and time. Spencer next commented on the barriers to correct observation and the interference which results from the emotional engagement of the social investigator in the subject of his study. Of particular importance, in this context, is the fact of interrelatedness of the observer to the situation being observed.

We have to consider three main causes of distorted observation. These are:

- Those due to the inadequacies of our sense-organs;
- Those due to the interdependence of observation and inference; and
- Those typical to the social sciences, i.e., those due to the impossibility of observing human beings without influencing their actions and being influenced by them.

*(i) Inadequacies of Our Sense Organs:*

Traditionally we tend to regard our sense organs as reliable, though perhaps not as powerful as we would like them to be. But in fact our sense organs operate in a highly variable, erratic and selective manner. Psychologists have conducted experiments which have shown that what man perceives on a particular occasion depends greatly on his state of mind and body at the time. There is a wealth of evidence to show that it is thoroughly unsafe to rely on the everyday observation.
(ii) **Observation and Inference:**

Observation and inference are inseparable. Anything that impinges on our senses has a meaning for us largely to the extent we relate it to what we already know. Without any frame to start with, new experiences are isolated, unidentifiable, and meaningless. The research worker with no frame of reference sees much, but identifies little. The researcher with too rigid a frame of reference sees only such things as confirm his preconceptions. Thus, we are faced with the very awkward and serious difficulty that our senses are not, even under the most favourable conditions, the means for providing us with ‘objective knowledge’ about what we set out to observe. There are various possible ways of coming to grips with this difficulty. One way is to ignore it. Even if our observations are not very objective, they are, it may be argued, at least able to prove to our personal satisfaction that what we see is true. There is the danger that non-controlled observation is likely to give us the feeling that we know more than we actually do, about what we have seen. The data are so real and vivid, hence our feelings about them so strong that we sometimes tend to mistake the strength of our emotions for the depth of comprehensions.

(iii) **Observer and Observed:**

We must pay some attention to another critical problem in social science, viz., the face of observation itself modifying the situation being observed, so long as social science research is based on documentary data, there is obviously no reason to fear that distortions will arise from this source. But social science research involves human observers and the interactive human subjects.

(iv) **Observer-Caused Effects:**

The researcher’s effort to study a phenomenon always affects the phenomenon and is most likely to change it. The observer is invariably a part of the same environment as is the phenomenon he is studying. Therefore, the observer like all other aspects of the environment cannot but influence the phenomenon, only, sometimes the effect may be light that it could be ignored. This is usually the case with the natural sciences except perhaps in chemistry in which the chemist’s breath is likely to affect the reaction he is running. The observer effect in medical examination straddles the physical and social sciences; for example, when a doctor takes a patient’s blood pressure, fear or excitement may force blood pressure far above the actual level. The humanness of the observer and his inevitable interaction with the observed are bound to create distorting effects to which we must pay some attention. The critical
problem in social sciences is that the existence of observer itself modifies the situation being observed. So long as social science research is based on documentary data, there is obviously no reason to fear that distortions will arise from this source. But social science research involves human observers and the interactive human subjects. One way of allowing for observer interference when it cannot be prevented is to vary the amounts and kinds of observer participation when all else is held constant; for example, in a factory being observed for the structure of human relations the observers may vary the amount of time they spend with the workers and the degree of friendship and hostility towards the workers during the time they interact with the workers. If such variations on the part of the observers produce no differences then it would be secure to conclude that observer is not an important source of variations. As an added control it could be possible to bring the observer into situation in which nothing else is changed from normal and then measure whether or not his presence alone would cause any differences. Prof. Wirth once said, “A society is possible in the last analysis because the individuals in it carry around in their heads some sort of picture of that society. If the participants regard the changed situation as an abnormal one which does not fit into their conception of the world, their self consciousness will be aroused, their behavior will be disturbed and the situation will not adapt itself in a way enabling the investigator to predict a similar adaptation in natural circumstances. The presence of an observer, even merely as one extra person in the interacting situation, will lead to distortion.