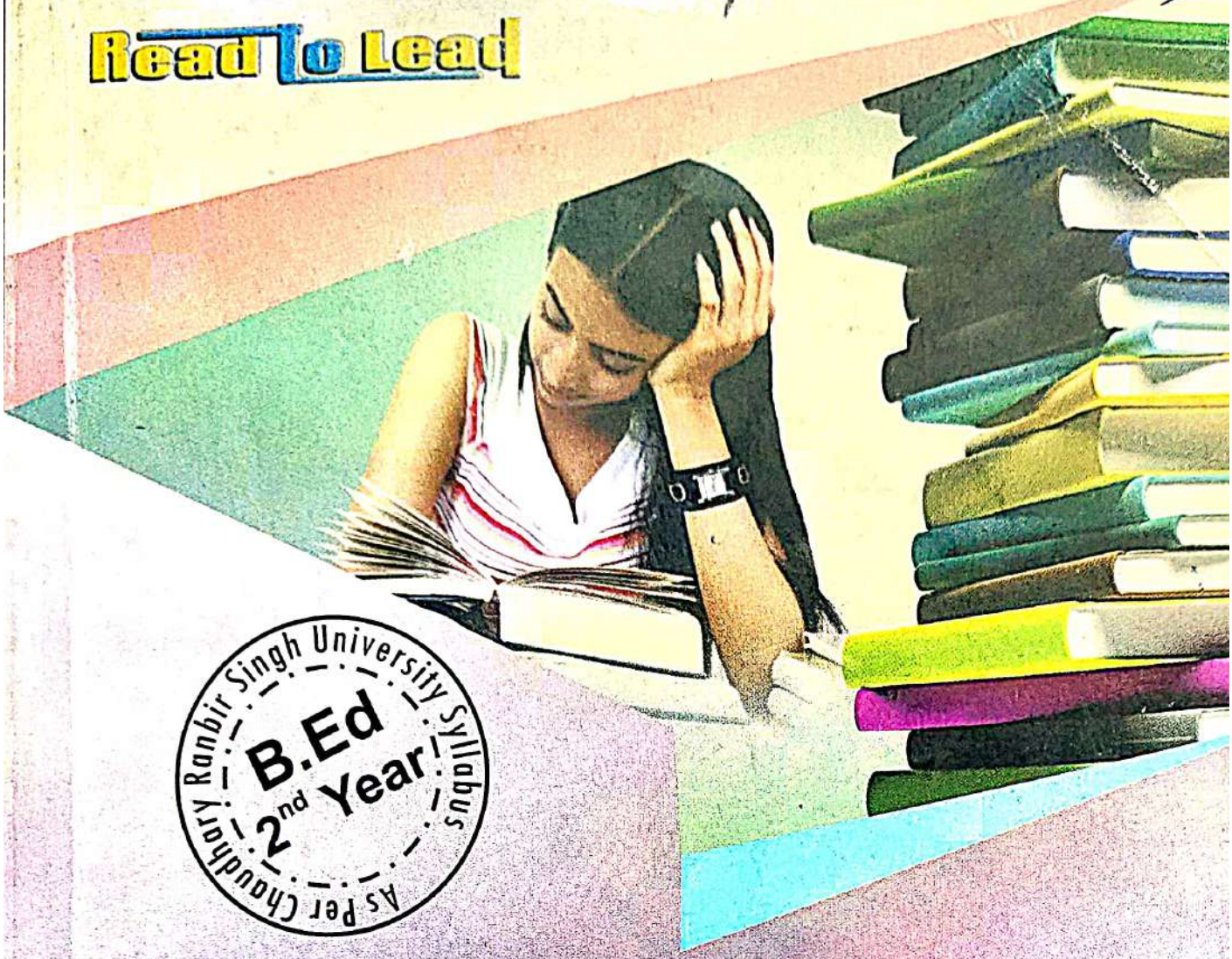
Paper-1 80 max

Read to Lead



As Per Chaudhary Ranbir Singh University Syllabus
B.Ed
2nd Year

Knowledge and Curriculum

Dr. Aruna Anchal
Dr. Saroj Chaudhary

THAKUR PUBLISHERS
ROHTAK

KNOWLEDGE AND CURRICULUM

B.Ed, Second Year

According to the new syllabus of
'Chaudhary Ranbir Singh University, Jind'

Dr. Aruna Anchal
Ph.D. (Education Psychology), M.Ed., M.A. (History & Hindi)
Principal,
Ravindra Bharti College of Education, Jhajjar, Haryana

Saroj Chaudhary
M.Ed, M.A, M.Phil (Political Science, Edu.), B.Ed., Ph.D. (Purs.)
Head, Department of Education,
Doon Valley Institute of Education, Karnal, Haryana

THAKUR PUBLISHERS, ROHTAK

* Lucknow * Meerut * Bhopal * Nagpur * Bhubaneswar * Jalandhar *
* Ahmedabad * Mumbai * Chennai * Bengaluru * Pune * Kerala * Jaipur *

COURSE-I: KNOWLEDGE AND CURRICULUM

Time: 3 Hours **Max. Marks: 100**

Credits-4 **(Theory: 80, Internal: 20)**

Unit 1: Knowledge: Key Concepts

- Meaning of Knowledge and Knowing, Kinds of knowledge and Sources of knowledge
- Methods of acquiring Knowledge
- Distinction between- Information and Knowledge, Belief and truth, Reasoning and Analysis
- Different Ways of Knowing- Relative roles of the knower and the known in knowledge transmission and construction
- Contribution of the teachers in assimilation and dissemination of information and knowledge

UNIT 2: Different Facets of Knowledge and Relationship, such as:

- Local and University
- Concrete and Absolute
- Theoretical and Practical
- Contextual and Textual
- School and Out of School

Culture and Knowledge

- Role of culture in knowing
- Ways of knowledge rendered in to action
- Emerging problems relating to knowledge

Epistemology of Indian Philosophies

- Sankhya
- Vedanta

Epistemology of Western Philosophies

- Idealism, Naturalism, Pragmatism and Existentialism

UNIT 3: Conceptual Framework of Curriculum

- Curriculum – Meaning, nature and its organizing curriculum components
- Principles of curriculum construction
- Bases of curriculum

Different Approaches to Curriculum Theory

- Traditional approach
- Learner driven approach
- Critical approach

Curriculum Process and Different ways of Approaching Curriculum Theory

- Curriculum as product
- Curriculum as process
- Participatory approach

UNIT 4: Curriculum Design Models

- Discipline Centered Design, Learner Centered Design & Problem Centered Design
- Components required in Curriculum Development
- Curriculum Change: Meaning, Need and Factors affecting Curriculum Change

Contents

Unit 1: Knowledge: Key Concepts

1.1.	Knowledge	13
1.1.1.	Meaning and Definition of Knowledge	13
1.1.2.	Nature/Characteristics of Knowledge	14
1.1.3.	Kinds/Types of Knowledge	15
1.1.4.	Sources of Knowledge	17
1.1.5.	Methods of Acquiring Knowledge	18
1.1.6.	Importance of Knowledge	19
1.2.	Distinction between various Aspects of Knowledge	20
1.2.1.	Information and Knowledge	20
1.2.2.	Distinction between Belief and Truth	22
1.2.3.	Distinction between Reasoning and Analysis	23
1.3.	Knowing	25
1.3.1.	Meaning of Knowing	25
1.3.2.	Difference between Knowledge and Knowing	26
1.3.3.	Different Ways of Knowing	26
1.3.4.	Patterns of Knowledge/Knowing Framework	29
1.3.5.	Relative Roles of the Knower and the Known in Knowledge Transmission and Construction	30
1.3.5.1.	Role of Knower (Teacher) in Knowledge Transmission and Construction	30
1.3.5.2.	Role of known (Learner) in Knowledge Transmission and Construction	33
1.4.	Contribution of Teachers in Assimilation and Dissemination of Information and Knowledge	34
1.4.1.	Role of a Teacher in Knowledge Construction	35
1.4.1.1.	Knowledge under Construction	36
1.4.1.2.	Role of Teachers in Knowledge Construction	37
1.4.1.3.	Knowledge Construction through Dialogue	38
1.4.1.4.	Role of a Teacher	39
1.4.1.5.	Factors Involved in Dialogic Instruction	40
1.5.	Exercise	41

Unit 2: Different Facets of Knowledge and Relationship

2.1.	Forms of Knowledge	42
2.1.1.	Local Knowledge and Universal Knowledge	42
2.1.2.	Concrete Knowledge and Abstract Knowledge	44
2.1.3.	Theoretical Knowledge and Practical Knowledge	44
2.1.4.	Contextual Knowledge and Textual Knowledge	45
2.1.5.	School Knowledge and Out of School Knowledge	45
2.2.	Culture and Knowledge	45
2.2.1.	Culture	46
2.2.2.	Elements of Culture	46
2.2.3.	Relationship between Culture and Education	47
2.2.4.	Impact of Culture on Educational Institutions	49
2.2.5.	Impact of Education on Culture	49

2.2.6.	Role of Culture in Knowing	50
2.2.7.	Ways of Knowledge Rendered into Action	51
2.2.8.	Emerging Problems Relating to Knowledge	52
2.3.	Epistemology	53
2.3.1.	Introduction	53
2.3.2.	Meaning of Epistemology	53
2.3.3.	Epistemology and Education	54
2.3.4.	Issues in Epistemology	54
2.3.5.	Educational Implications of Epistemology	55
2.4.	Epistemology of Indian Philosophies	56
2.4.1.	Introduction	56
2.4.2.	Philosophical Basis of Knowledge According to Indian Philosophy	56
2.4.3.	Nyaya	57
2.4.4.	Vaisesika	59
2.4.5.	Sankhya	59
2.4.5.1.	Impact of Sankhya Philosophy on Education	60
2.4.6.	Yoga	61
2.4.7.	Mimamsa	61
2.4.8.	Vedanta	62
2.5.	Epistemology of Western Philosophies	64
2.5.1.	Philosophical Basis of Knowledge According to Western Philosophy	64
2.5.1.1.	History of Western Philosophy	64
2.5.1.2.	Methods of Western Philosophy	66
2.5.2.	Criticism of Indian and Western Philosophies	68
2.5.3.	Comparison between Indian and Western Philosophies	69
2.6.	Schools of Western Philosophy	70
2.6.1.	Introduction	70
2.6.2.	Major Philosophical Schools	70
2.7.	Idealism	71
2.7.1.	Meaning and Definition of Idealism	71
2.7.2.	Characteristics of Idealism	72
2.7.3.	Principles of Idealism	72
2.7.4.	Forms of Idealism	73
2.7.5.	Idealism in Education	74
2.7.5.1.	Aims of Education	74
2.7.5.2.	Stages of Education	75
2.7.6.	Impact of Idealism on Education	76
2.7.6.1.	Idealism and Curriculum	76
2.7.6.2.	Idealism and Methods of Teaching	76
2.7.6.3.	Idealism and Teacher	77
2.7.6.4.	Idealism and Student	77
2.7.6.5.	Idealism and Discipline	77
2.7.6.6.	Idealism and School	77
2.7.6.7.	Idealism and Assessment	77
2.7.7.	Merits of Idealism	78
2.7.8.	Demerits of Idealism	78
2.8.	Naturalism	79
2.8.1.	Meaning and Definition of Naturalism	79
2.8.2.	Characteristics of Naturalism	80

		81
2.8.3.	Principles of Naturalism	82
2.8.4.	Forms of Naturalism	82
2.8.5.	Naturalism in Education	83
2.8.5.1.	Aims of Education	83
2.8.5.2.	Stages of Education	84
2.8.6.	Impact of Naturalism on Education	84
2.8.6.1.	Naturalism and the Curriculum	85
2.8.6.2.	Naturalism and Methods of Teaching	85
2.8.6.3.	Naturalism and the Teacher	85
2.8.6.4.	Naturalism and Student	85
2.8.6.5.	Naturalism and Discipline	85
2.8.6.6.	Naturalism and School	86
2.8.7.	Merits of Naturalism	86
2.8.8.	Demerits of Naturalism	86
2.9.	Pragmatism	86
2.9.1.	Meaning and Definition of Pragmatism	87
2.9.2.	Characteristics of Pragmatism	87
2.9.3.	Principles of Pragmatism	88
2.9.4.	Forms of Pragmatism	89
2.9.5.	Pragmatism in Education	89
2.9.5.1.	Aims of Education	89
2.9.6.	Impact of Pragmatism on Education	89
2.9.6.1.	Pragmatism and Curriculum	90
2.9.6.2.	Pragmatism and Methods of Teaching	91
2.9.6.3.	Pragmatism and Teacher	91
2.9.6.4.	Pragmatism and Discipline	91
2.9.6.5.	Pragmatism and School	91
2.9.7.	Merits of Pragmatism	91
2.9.8.	Demerits of Pragmatism	92
2.9.9.	Comparative Study of Idealism, Pragmatism and Naturalism	94
2.10.	Existentialism	94
2.10.1.	Meaning of Existentialism	97
2.10.2.	Characteristics of Existentialism	98
2.10.3.	Principles of Existentialism	98
2.10.4.	Existentialism in Education	99
2.10.4.1.	Aims of Education	101
2.10.5.	Impact of Existentialism on Education	101
2.10.5.1.	Existentialism and Curriculum	101
2.10.5.2.	Existentialism and Methods of Teaching	102
2.10.5.3.	Existentialism and Teacher	102
2.10.5.4.	Existentialism and Discipline	102
2.10.5.5.	Existentialism and School	103
2.10.6.	Educational Implications of Existentialism	105
2.10.7.	Merits of Existentialism	105
2.10.8.	Demerits of Existentialism	106
2.11.	Exercise	

Unit 3: Conceptual Framework of Curriculum

3.1.	Curriculum	107
3.1.1.	Meaning and Definition of Curriculum	107
3.1.2.	Nature/Characteristics of Curriculum	108
3.1.3.	Objectives of Curriculum	109
3.1.4.	Principles of Curriculum	109
3.1.5.	Types of Curriculum	110
3.1.6.	Process of Curriculum	114
3.1.7.	Organisation of Curriculum	115
3.1.7.1.	Principles of Curriculum Organisation	116
3.1.7.2.	Approaches of Curriculum Organisation	116
3.1.7.3.	Organizing Curriculum Components	118
3.1.7.4.	Organisation of Curriculum According to Secondary Education Commission	120
3.1.8.	Factors Affecting Curriculum	122
3.1.9.	Importance of Curriculum	123
3.2.	Curriculum Construction	125
3.2.1.	Concept of Curriculum Construction	125
3.2.2.	Meaning & Definition of Curriculum Construction	125
3.2.3.	Principles of Curriculum Construction	125
3.2.4.	Stages of Curriculum Construction	127
3.2.5.	Importance of Curriculum Construction	128
3.2.6.	Modern Trends in Curriculum Construction	128
3.3.	Bases of Curriculum	129
3.3.1.	Philosophical Bases of Curriculum	131
3.3.1.1.	Idealism and Curriculum	131
3.3.1.2.	Naturalism and Curriculum	133
3.3.1.3.	Realism and Curriculum	135
3.3.1.4.	Pragmatism (Experientialism) and Curriculum	136
3.3.1.5.	Humanism and Curriculum	137
3.3.2.	Sociological Bases of Curriculum	138
3.3.3.	Psychological Bases of Curriculum	140
3.3.3.1.	Behaviourists Theories	140
3.3.3.2.	Cognitive Theories	141
3.3.3.3.	Humanistic Theories and Phenomenology	142
3.3.4.	Political Bases of Curriculum	143
3.3.5.	Cultural Bases of Curriculum	144
3.3.6.	Economic Bases of Curriculum Development	146
3.4.	Different Approaches to Curriculum Theory	147
3.4.1.	Curriculum Approach	147
3.4.2.	Traditional Approach	147
3.4.3.	Learner-Centred Approach	148
3.4.4.	Critical Approach	149
3.4.5.	Comparative Study of Traditional Approach, Learner-Driven Approach and Critical Approach	150
3.5.	Curriculum Process and Different Ways of Approaching Curriculum Theory	151
3.5.1.	Curriculum Development Process	151
3.5.2.	Ways of Approaching Curriculum Theory	152

3.5.2.1. Curriculum as a Syllabus to be Transmitted 153
3.5.2.2. Curriculum as Product 153
3.5.2.3. Curriculum as Process 155
3.5.2.4. Curriculum as Praxis 157
3.5.2.5. Curriculum as Context 157
3.5.3. Participatory Approach 158
3.6. Exercise 159

Unit 4: Curriculum Design Models

4.1. Curriculum Design 160
4.1.1. Meaning and Definition of Curriculum Design 160
4.1.2. Characteristics of Curriculum Design 161
4.1.3. Sources for Curriculum Design 161
4.1.4. Steps in Curriculum Design 162
4.1.5. Importance of Curriculum Design 162
4.1.6. Various Models of Curriculum Design 163
4.1.7. Discipline Design 163
4.1.8. Learner-Centred Design 163
4.1.9. Problem-Centred Design 165
4.2. Curriculum Development 166
4.2.1. Meaning and Definition of Curriculum Development 166
4.2.2. Concept of Curriculum Development 167
4.2.3. Objectives of Curriculum Development 167
4.2.4. Principles of Curriculum Development 168
4.2.5. Stages of Curriculum Development 168
4.2.6. Importance of Curriculum Development 170
4.2.7. Difference between Curriculum Development and Curriculum Design 170
4.2.8. Components Required in Curriculum Development 171
4.3. Models of Curriculum Development 172
4.3.1. Introduction 172
4.3.2. Components of Curriculum Development Model 172
4.3.3. Curriculum Model Frameworks 173
4.3.4. Hilda Taba Model 173
4.3.4.1. Stages in Taba Model 173
4.3.4.2. Applications of Taba Model 174
4.3.4.3. Strengths of Taba Model 174
4.3.5. Saylor and Alexander Model 175
4.3.6. Tyler Model 176
4.4. Curriculum Change 177
4.4.1. Meaning of Curriculum Change 177
4.4.2. Need of Curriculum Change 178
4.4.3. Objectives of Curriculum Change 179
4.4.4. Types of Curriculum Change 179
4.4.5. Stages of Curriculum Change 180
4.4.6. Factors Affecting Curriculum Change 180
4.4.7. Developing a Programme for Curriculum Change 180
4.5. Exercise 181

Model Paper 182

UNIT 1 Knowledge: Key Concepts

1.1. KNOWLEDGE

1.1.1. Meaning and Definition of Knowledge

Knowledge is a valuable treasure which is gifted through the spirit which becomes the source of life. Human being is equal in all nature at the time of birth. Whether one is a saint or a scientist one must concede that with birth come life, knowledge and power. A dead man has no life, no power and no knowledge. It stands to reason that knowledge is a divine gift that accompanies the spirit which is infused into a person between conception and birth. It is the Spirit that is the life source. Without the spirit, there is no life and no knowledge.

Knowledge is the mental grasp of the facts of reality. It is the awareness of the identity of particular aspects of reality. It is not just an awareness of reality, but an understanding of it. It is a successfully formed conclusion about some aspect of reality. An example of knowledge is the identification of the law of gravity. It is a characteristic of reality that is identified and understood.

Knowledge is gained through a successful evaluation of one's perceptions. It is through the use of reason that man draws conclusions about the world. It is through objectivity that man identifies the validity of those conclusions.

Knowledge is the awareness and understanding of particular aspects of reality. It is clear lucid information gained through the process of reason applied to reality.

According to Socrates, "Knowledge is the highest virtue".

According to Nonatea and Takeuchi, "Knowledge is justified true belief that increases an entity's capacity for effective action."

According to Foskett, "Knowledge is what I know; information is what we know".

According to Albert Einstein, "Knowledge is experience. Everything else is just information".

According to William James, "Knowledge is another name for practical achievement and success".

According to Prof. Russell, "Knowledge is that which enlightens the human mind"

According to Prof. Joad, "Knowledge is an addition to our existing information and experience".

According to Karl Sweiby, "Knowledge is a capacity to act."

The traditional approach of knowledge is that knowledge requires three necessary and sufficient conditions, so that knowledge can then be defined as **"justified true belief"**:

1) **Truth:** Since false propositions cannot be known for something to count as knowledge, it must actually be true.

   Aristotle expressed it as, "To say of something which is that it is not, or to say of something which is not that it is, is false. However, to say of something which is that it is, or of something which is not that it is not, is true."

2) **Belief:** Because one cannot know something that one does not even believe in, the statement "I know x, but I do not believe that x is true" is contradictory.

3) **Justification:** As opposed to believing in something purely as a matter of luck. The most contentious part of all this is the definition of justification, and there are several schools of thought on the subject.

According to Evidentialism, "what makes a belief justified in this sense is the **possession of evidence**; a belief is justified to the extent that it fits a person's evidence."

1.1.2. Nature/Characteristics of Knowledge

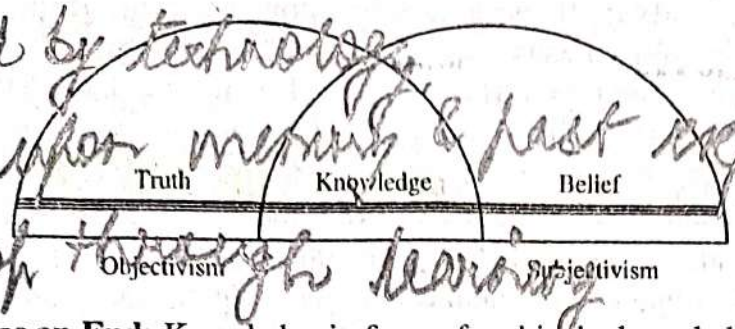
Nature of knowledge can be understood on following grounds:

1) **Knowledge is Truth:** Knowledge actually is truth. **Aristotle** expressed it as, "To say of something which is that it is not, or to say of something which is not that it is, is false. However, to say of something which is that it is, or of something which is not that it is not, is true."

2) **Knowledge is Belief:** Because one cannot know something that one does not even believe in, the statement "I know x, but I do not believe that x is true" is contradictory.

3) **Knowledge is Power:** How knowledge leads to power is best seen in man's increasing control of the forces of nature. In primitive times man had no knowledge of nature and thought that the trees and the hills inhabited by spirits and fairies. He believed in ghosts and gods and was himself inert and powerless. But now man knows many of the mysteries of nature, and his knowledge is reflected in his daily growing power over natural forces. Knowledge in any situation cannot be weak. Knowledge has immense power to defeat untruth and ignorance.

4) **Knowledge never Ends:** Knowledge is always dynamic. It never ends. Ancient time's knowledge is still present. It proof that knowledge never ends.



5) **Knowledge as an End:** Knowledge in form of end is the knowledge which one wants to achieve. The end of human knowledge is the beginning of the divine knowledge. The divine knowledge and human ignorance are the two things which we see in our day to day life. The divine knowledge is an illumining, fulfilling and immortalising power. The human ignorance is a destructive power. The divine knowledge is the very birth of immortality. Human ignorance is the song of death. The end of all knowledge is self-knowledge. "Know thyself", which all of you are familiar with. The Sanskrit term for it is "Atmanam Viddhi". Know thyself. How can we know ourselves? We have to know ourselves by taking help from someone who has already known himself. Self-knowledge is self-discovery, and in self-discovery we feel the conquest of our own self. Self-discovery, God-knowledge and self-conquest, these are one and the same.

6) **Knowledge as a Means:** Knowledge seems in form of a means when one achieves knowledge and develops an understanding of it and applies it in practicable life.

7) **Knowledge as a Cognitive Process:** Knowledge is a cognitive process which we learn and acquire through our mental abilities. In developing knowledge cognitive process helps through perception, reasoning and defining.

1.1.3. Kinds/Types of Knowledge

Knowledge can be of different kinds/types:

1) **General Knowledge:** It can be categorised into two parts:

   i) **A Priori or Non-Empirical Knowledge:** A priori knowledge is knowledge that is known independently of experience. It is acquired through anything that is independent from experience. A priori knowledge is a way of gaining knowledge without the need of experience. A priori knowledge is often contrasted with posteriori knowledge, which is gained by experience.

   ii) **A Posteriori or Empirical Knowledge:** A posteriori knowledge is knowledge that is known by experience. This knowledge comes through our senses. This knowledge is empirical knowledge. Science is the best example of a method for ascertaining the accuracy of such knowledge. Scientific knowledge is a result of the practice of the method of observation, abduction of a hypothesis, careful observation, refinement of hypothesis, deduction of test for hypothesis, testing and experimentation, confirmation or falsification of the hypothesis.

2) **Types of Knowledge According to Upnishad:** Knowledge which can be categorised under Upnishads is Pra Vidya and Apra Vidya:

i) **Pra Vidya:** It is a combination of two words, par, in Hindu philosophy, means existence, paramount object, the highest point or degree, final beatitude; and vidya means knowledge, philosophy, science, learning, scholarship. Para Vidya means higher learning or learning related to the self or the ultimate truth i.e. transcendental knowledge. Vedanta affirms that those who gain the knowledge of the self-attain kaivalya, they become liberated, they become Brahman. The higher knowledge is by which the immutable and the imperishable Atman is realised, which knowledge brings about the direct realisation of the supreme reality, the source of all. The knowledge of the Atman is very subtle; it cannot be obtained out of one's own effort; the Atman cannot be intuitively apprehended by more intellectual equipments.

ii) **Apra Vidya:** A human being is blessed with the faculty of self-knowledge which is Apara Vidya or logical reasoning. Apara Vidya encompasses the entire spectrum of 'objects', that is anything, that can be objectified by our senses or mind. Anything that can be 'seen' is an object of Apara Vidya. Under this category comes all our worldly knowledge's. Science, arts, commerce, management, technical knowledge's etc. Apara Vidya is worth knowing because of various reasons. One, specialisation in any one field of objective world, which helps us to serve our society and world better. Two, pursuit of knowledge disciplines are our mind and intellect, so that we become capable of thinking deeply and properly, and last but not the least, this pursuit of Apara Vidya helps us to realise the ephemerality of the objective world, and thus helps us to get qualities of vairagya etc. and also motivates us to look out for something more permanent in this ever changing world.

3) **Types of Knowledge According to Jain Philosophy**

i) **Mati Knowledge:** It is ordinary cognition, which is obtained by normal functioning of sense perceptian. It is based on sensuous perception.

ii) **Shruti Knowledge:** This knowledge is derived through symbols, signs or words. All verbal knowledge is Sruta jnana. It includes all canonical, scriptual or both knowledge. Sruta jnana is of four kinds, namely, labdhi or association, bhavana or attention, upayoga or understanding, and naya or aspects of the meaning of things.

iii) **Awadhi Knowledge:** It is a sort of or direct visual intuition which enables a person to know things or objects even at a distance of time or space, without their coming into contact with sense organs.

iv) **Telepathy Knowledge:** This knowledge is that by which the soul can directly know the thoughts of others.

v) **Kewalya Knowledge:** It comprehends all substances and their modifications. It is the pure, absolute, complete, whole and total knowledge unlimited by space, time or object. It is the very omniscience.

Apart from above mentioned knowledge there are other types of knowledge such as, authoritative knowledge, reasoning knowledge, scientific knowledge, pragmatic knowledge, intuitive knowledge, word knowledge and direct and indirect knowledge.

1.1.4. Sources of Knowledge

In epistemology, a common concern with respect to knowledge is what sources of information are capable of giving knowledge. The following are some of the major sources of knowledge:

1) **Perception:** It is that which can be perceived through the experiences of the senses. The view that experience is the primary source of knowledge is called empiricism.

2) **Reason:** It can be considered a source of knowledge, either by deducing truths from existing knowledge, or by learning things a priori, discovering necessary truths (such as mathematical truths) through pure reason. The view that reason is the primary source of knowledge is called rationalism.

3) **Introspection:** Knowledge of one's self that can be found through internal self-evolution. This is generally considered to be a sort of perception. **For example,** I know I am hungry or tired.

4) **Memory:** It is the storage of knowledge that was learned in the past whether it be past events or current information.

5) **Testimony:** It relies on others to acquire knowledge and communicate it to us. Some deny that testimony can be a source of knowledge, and insist that beliefs gained through testimony must be verified in order to be knowledge.

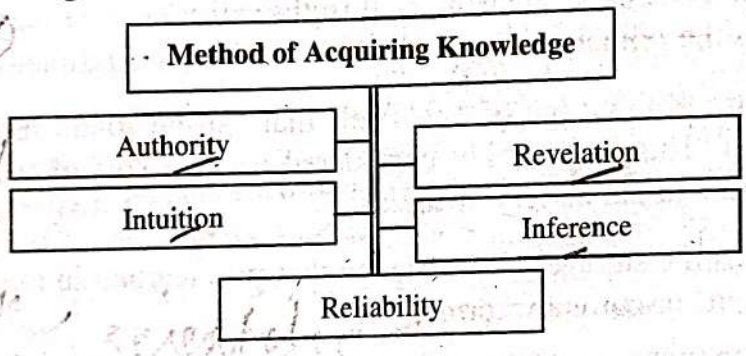
6) **Intuition:** It is personal spiritual experience. The knowledge obtained through the functioning of the causal body (Karana Sarira) is intuition. **Sri Aurobindo** calls it the Supermind or Supramental Consciousness. There is direct perception of truth, or immediate knowledge through Samadhi or the super conscious state. Professor Bergson preached about intuition in France to make the people understand that there was a higher source of knowledge than the intellect. In intuition there is no reasoning process at all. It is a direct perception. Intuition transcends reason but does not contradict it. Intellect takes a man to the door of intuition and returns. Intuition is **Divya Drishti** (divine vision); it is the eye of wisdom. Spiritual flashes and glimpses of truth, inspiration, revelation and spiritual insight come through intuition. The mind has to be pure for one to know that it is the intuition that is functioning at a particular moment.

7) **Brahma-Jnana (Knowledge of God):** It is above intuition. It transcends the causal body and is the highest form of knowledge. It is the only reality.

8) **Self-Realisation (Atma-Jnana):** It means knowledge of the self or soul. The reason the term 'realisation' is used instead of 'knowledge' is that jnana refers to knowledge of self-based on experience, not mere intellectual knowledge." Atma-Jnana, literally "knowledge of the soul or supreme spirit", Atma-Jnana is above intuition. It is the highest form of knowledge. It is the only reality.

1.1.5. Methods of Acquiring Knowledge

Knowledge acquisition is the process of gaining knowledge from information, can be understood as the integration of new information into that which is already coherently embodied. Considered in this way, the transformation of information into knowledge is an internal process, whether to an individual, a group or a community, and while there may be techniques to enhance that process, they lay outside scope of the current thesis. What follows is a pragmatic summary of different modes of knowledge acquisition. Thus, there are several methods of acquiring knowledge; some of them are discussed below:



1) **Authority:** Authority Leaders, considered knowledgeable and wise, decide what is true for everyone, sometimes during periods of special inspiration, insight or perhaps revelation. The surrender to authority is common in most grounds of human endeavour. It acts to stabilise and encapsulate a corpus of traditional knowledge against which new ideas can be tested.

2) **Revelation:** It is a method, often when seers and prophets employ magic and divination techniques. What is usually assumed is that the practitioners have ability to access knowledge through inspired communion with supernatural being(s); such access usually requiring, mindful techniques such as faith (belief) sometimes induced by body renunciation techniques.

3) **Intuition:** It is the direct, immediate and certain apprehension of truth without the intervention of conscious reasoning or related sensory perceptions. The difference between intuition and revelation is, the person doing the intuiting does not assume that the source of the knowledge is external to workings of their own brain.

4) **Inference:** It is a term covering a number of forms of reasoning in which conclusions are drawn or judgments made on the basis of circumstantial evidence and prior conclusions rather than purely on the basis of direct observation or knowledge arrived by direct observation. The conclusion may be correct, incorrect, and partially correct, correct to within a certain degree of accuracy, or correct in certain situations. Inferential methods are the principal methods of science, although not all types are undisputedly considered applicable to all fields of inquiry. Some of inferential methods are:
   i) **Deductive Inference:** A way of reasoning in which a collection of ideas are built into a coherent whole through the rigorous deductive application of certain axioms or postulates using propositional, predicate, modal, and/or fuzzy logics. The appeal to deductive reason (syllogism) as a source of knowledge or justification is known as rationalism.
   ii) **Inductive Inference:** A form of reasoning that makes generalisations based on individual instances. It is used to ascribe properties or relations to types based on observed instances; to formulate laws based on the results of a limited number of experiments or the direct observations of recurring phenomenal patterns. In its rudimentary form, it is the process of learning through trial and error experience.

5) **Reliability:** It is a method for acquiring knowledge based on various belief forming processes. It justifies the beliefs in the veridicity of perceptual sensations if the resulting perception is known to lead to a suitably high proportion of true beliefs. It is not a requirement of users of the method, or anyone else, know that the process is reliable or have any sort of knowledge of its reliability; all that is required is that it is infact reliable. Thus, no appeal to sensory experience is required, thus effectively short-circuiting the issue that divides representationalism and phenomenalism.

1.1.6. Importance of Knowledge

Knowledge simply refers to the condition of knowing something. It is the information, facts, principles, skills and understanding, etc., that is acquired through education and experience.

1) **Knowledge is Powerful and Important Part of Life:** Knowledge is a powerful acquisition in life which, when given to someone, does not decrease. Our knowledge is the collective thought and experience of our forefathers, wise men who left behind a rich heritage and wealth of information. A famous Sanskrit verse says that an educated person is honoured everywhere. The importance of a knowledgeable person is immense. Wherever he goes he is offered a place of reverence, a seat of authority, and he commands the hearing of everyone present. The power of knowledge lends him such distinctions.

2) **Leads to Right Path:** Knowledge is the treasure which leads to right path. If he has true knowledge then he will lead to right path otherwise he will mislead on his path.

3) **Helpful in Problem Solving:** Human beings constantly face problems everyday life, sometimes problems that they can not possibly seem to overcome. With knowledge, they can improve their abilities of thinking critically. The problems they face in society, they may face in real life. Thus, to solve daily problems knowledge is an important weapon.

4) **Understanding Self:** Knowledge can actually make man happy, in that he can start to really think about and understand himself. What makes him happy, what does he enjoy exploring and learning about? Knowledge helps him in a variety of ways, but the best way is that it helps in understanding who we really are.

5) **Helpful in Setting and Attaining Goals of Life:** Knowledge is the base of life. It gives the vision to know, to anticipate and it sets the goals of life. For attaining the goals of life, knowledge gives the power and the ability to be and to become what we want to achieve in our life. We are endowed by the nature with a great tool, our mind which can accumulate knowledge and process it; we can use it in best way to gain.

6) **Helpful in Decision-Making:** Knowledge is also a very important tool in decision-making. Even to make simple decision in our life, we need knowledge. We must have right knowledge and know which knowledge is required in decision-making to reach the goals.

7) **Knowledge Improves Thinking:** Knowledge improves thinking in different ways. It helps in solving problems by freeing up space in working memory. It helps you circumvent thinking by acting as a ready supply of things that already thought about.

1.2. DISTINCTION BETWEEN VARIOUS ASPECTS OF KNOWLEDGE

There are various aspects of knowledge which are closely related with each other. These aspects of knowledge have some distinction between each other also. Thus, understanding the different aspects of knowledge is essential. These aspects may include:

1) Information and knowledge,
2) Belief and truth, and
3) Reasoning and analysis, etc.

1.2.1. Information and Knowledge

Education is fundamentally affected by a series of events generally referred to as "the information explosion." The enormous increase in available information presents major concerns related to educational content, teaching processes, and basic information skills needed by learners. Researchers need to probe into serious questions about the nature, role, and impact of specific attributes of information (e.g., information systems, resources, skills, and processes) in education. Although most educators would agree that all education is information-based to some degree,

there is no unifying framework, model, theory, methodology, or even vocabulary for considering the nature and impact of specific information attributes. Information is an explicitly constructed message, always ultimately constructed by a sentient being. The word information is derived from Latin word *'informare'* which means "give form to". The etymology, thus, connotes an imposition of structure upon some indeterminate mass. Information may be defined as "the data that are accurate and timely, specific and organised for a purpose, presented within a context that gives it meaning and relevance, and can lead to an increase in understanding and decrease in uncertainty."

According to Parker (1974), Information is "the pattern of organisation of matter and energy."

According to Oxford English Dictionary, "Knowledge communicated concerning some particular fact, subject or event; that of which one is apprised or told; intelligence, news".

Information is a message that contains relevant meaning, implication, or input for decision and/or action. Information comes from both current (communication) and historical (processed data or reconstructed picture) sources. In essence, the purpose of information is to aid in making-decisions and solving problems or realising an opportunity.

Distinction between Knowledge and Information

Knowledge is the concise and appropriate collection of information in a way that makes it useful. Knowledge refers to a deterministic process where patterns within a given set of information are ascertained. **Information** may be defined as the data that are accurate and timely, specific and organised for a purpose, presented within a context that gives it meaning and relevance, and can lead to an increase in understanding and decrease in uncertainty. The main differences between Knowledge and Information are given below:

Table 1.1: Differences between Knowledge and Information

Basis of Differences	Knowledge	Information
Meaning	Knowledge is the concise and appropriate collection of information in a way that makes it useful.	Information refers to data that has been given some meaning by way of relational connection.
Nature	Knowledge is the theoretical or practical understanding of a subject.	Information is facts provided or learned about something or someone.
Aspect	By knowledge we mean human understanding of a subject matter that has been acquired through proper study and experience.	Information allows us to expand our knowledge beyond the range of our senses.
Basis	Knowledge is usually based on learning, thinking, and proper understanding of the problem area.	Information has usually got some meaning and purpose.
Origin	Knowledge is derived from information.	Information is derived from data.

1.2.2. Distinction between Belief and Truth

Trust and belief are two words that have similar connotations and are often considered as interchangeable. This holds truth in only some contexts, while in others these words have two separate meanings. The terms trust and belief are commonly used in relationships or to define the relationship between two people.

Trust and belief have deeper meanings when it comes to using it in relationships. The term trust is considered to be a much stronger than belief. Trust would actually mean that a person places complete confidence in another person. The person believes that the person he is trusting will do no harm to him. **For example**, a person that allows a friend to borrow his car, he has faith that the person would not harm his car and would return in the same condition that he/she borrowed.

Belief is the state of mind in which a person thinks something to be the case, with or without there being empirical evidence to prove that something is the case with factual certainty. In epistemology, philosophers use the term "belief" to refer to personal attitudes associated with true or false ideas and concepts. However, "belief" does not require active introspection and circumspection. **For example,** we never ponder whether or not the sun will rise. We simply assume the sun will rise. Belief does not necessarily encompass knowledge. It is neither a priori nor a posteriori knowledge. It is simply conviction based on trust of one's own judgment concerning the proposition in question.

Truth in our days is considered to contain different ways of knowledge such a language, perception, reasons, knowledge and above all belief. Religion can only be considered as belief as nobody can possibly prove the existence of God, but there are many people who believe in his existence. Truth is something that carries different connotations and meaning in all of the knowledge areas, but what we define as truth may or not apply for each respective situation. Eventually, truth is an objective requirement for knowledge. The difference between belief and truth is given under following table:

Table 1.2: Differences between Belief and Truth

Basis of Differences	Belief	Truth
Meaning	Belief is simple acceptance that a proposition is true, without regard to reasons.	Truth is most often used to mean being in accord with fact or reality, or fidelity to an original or standard.
Concept	Belief is when you accept an idea or a proposition as true and valid, even though it might not be logical.	Truth is something that carries different connotations and meaning in all of the knowledge areas.
Nature	Belief is a subjective requirement for knowledge.	Truth is an objective requirement for knowledge.
Basis	Belief may not necessary to be based on facts.	Truth is based on facts.
Proof	Belief does not need any proof.	Truth needs proof.
Relation	Truth is not an aim of belief.	Truth is the aim of belief.

1.2.3. Distinction between Reasoning and Analysis

Reasoning is the capacity for a person to make sense of things to establish and verify facts, to rationally work through data, information, facts, and beliefs. It is the process of forming conclusions and judgments from facts or premises. To put it plain and simple; it is the ability to coherently think from perceived premises to a logical conclusion.

Reasoning is generally seen as a means to improve knowledge and make better decisions. Reasoning is associated with thinking, cognition, and intellect.

According to Irving, "Reason is that special kind of thinking called inferring in which conclusions are drawn from premises."

According to Munn, "Reason is combining past experiences in order to solve a problem which cannot be solved by mere pludnetion of earlier solutions."

According to Skinner, "Reason is a word used to describe the mental recognition of cause and effect relationships. It may be the predictions of an event from an observed cause or the inference of cause from an observed event."

Types of Reasoning

There are two main types of reasoning, namely, inductive reasoning and deductive reasoning. However there are several other types of reasoning which are all related to each other:

1) **Deductive Reasoning:** It is the form of reasoning in which a conclusion follows logically and coherently from the factual premises and proposition. These deductive arguments are based upon the concept of sound and consistent reasoning. If the premises are true, than the systematic reasoning with a constructed syllogism is considered valid in a deductive argument in making its conclusion certain with a degree of logical certainty. Plainly speaking deductive reasoning is the rationality of reasoning from pure logic. It is considered by sound and pure logic.

2) **Inductive Reasoning:** It is a form of reasoning that uses analogies, examples, observations, and experiences to form conclusive propositions. Inductive logic also uses experiences to formulate statements based on general observations of recurring patterns in nature, science, and everyday occurrences pulling from such things as samples cases, experiments, and natural eye observations. It is used mostly to explain properties and relations to objects or types based on previous observations. It must be understood that inductive arguments do not try to establish their conclusions through absolute certainty, but through observable and predictive certainty.

3) **Abductive Reasoning:** In laymen's terms abductive reasoning is an argument to the best explanation. It is a form of reasoning that concludes in an abductive argument of what is plausible or most possibly true. Abductive logic is also considered inference to the best explanation. It is choosing the most likely or best hypothesis or explanation based upon the (most) relevant

evidence. Some people think that it is closer to inductive reasoning because it is not as sound logically as deducing an argument using pure logic as in deductive reasoning. Others think it is closer to deductive reasoning, because using sound logic one eliminates the most unlikely argument to come to the most reasonable solution.

4) **Reductive Reasoning:** It is a sub-set of argumentative reasoning which seeks to demonstrate that a statement is true by showing that a false or absurd result/circumstance follows from its denial. It is proving a statement true by reducing to the opposite of it and showing the absurdity of the opposite result. Reductive reasoning is also considered as a mixture of deductive and inductive reasoning. Inductive, because it strives to prove understanding of what is likely to be true. And deductive because it does resemble traits of critically and rationally of deductively reducing down to a conclusive or non-conclusive argument.

5) **Fallacious Reasoning:** It is not real reasoning. It is the faulty premises for critical thinking and logic. One of the tall tell signs of fallacious reasoning is a logical fallacy. A fallacy is usually an error in reasoning and argumentation often due to a misconception, false premises, or presumptuous conclusions. Circular Reasoning is actually considered more of a form of fallacious reasoning. It would not be considered valid or useful in a live debate.

Analysis

Analysis is the process of breaking a complex topic or substance into smaller parts in order to gain a better understanding of it. The technique has been applied in the study of mathematics and logic since before **Aristotle** (384–322 B.C.), though analysis as a formal concept is a relatively recent development.

According to Cambridge Dictionary of Philosophy, "Analysis is the process of breaking up a concept, proposition, linguistic complex, or fact into its simple or ultimate constituents."

According to John Sluibin, "Analysis is the methodical study of data in order to define to obtain outcomes."

According to Dale Yoder, "Analysis is a process which assigned to individual data and mark it through the planning."

Analysing requires separating the content and concepts of a text into their main components and then understand how these interrelate, connect and possibly influence each other.

Characteristics of Analysis

Various characteristics of analysis are as follows:

1) Various scientific methods are used in analysis.
2) In analysis, evaluation is done under empirical facts and principles.
3) Analyst needs facts related experience in analysing facts.
4) It is oriented towards practical applications.
5) Beliefs and assumptions impact on explaining facts in analysis process.

Types of Analysis

Various types of analysis are as follows:

1) **Descriptive Analysis:** It describes the main aspects of the data being analysed. **For example,** it may describe how well a football player is performing by looking at the number of touchdowns. This allows one to make comparisons among different athletes.

2) **Exploratory Analysis:** Exploratory data analysis is used to find out unknown relationships. This type of analysis is a great way to find new connections and to provide future recommendations.

3) **Inferential Analysis:** It is used by researcher in finding small sample in order to point out something about a larger population. **For example,** looking at the grades of all first graders to explain how well the entire elementary school is doing.

4) **Predictive Analysis:** It predicts future happenings by looking at current and past facts.

5) **Causal Analysis:** It is used to find out what happens to one variable when change some other variable. So, if police give out tickets for texting, this may cause less accidents to occur.

Table 1.3: Distinction between Reason and Analysis

Reason	Analysis
Reason is used to describe the mental recognition of cause and effect relationships.	Analysis is the process of breaking a complex topic or substance into smaller parts in order to gain a better understanding of it.
It is useful for attaining scientific knowledge.	Analyst needs facts related experience in analysing facts. It is also useful for attaining scientific knowledge.
Various methods are used in reasoning.	Various scientific methods are used in analysis.
Reasoning is associated with thinking, cognition, and intellect.	Analysts learn by doing. The thinking and reasoning processes involved in intelligence analysis.

1.3. KNOWING

1.3.1. Meaning of Knowing

Knowing is both a process and a product. As a process, it refers to the method of coming to know the phenomenon. Knowledge, as a product, is resultant of knowing the process. Knowing happens through perception, reason, and emotion; and codification are done in the language.

Similarly, there are means or source of every way of knowing. These sources are the knower's senses and mind. Different sources of knowing construct different forms of understanding and different types of knowledge.

1.3.2. Difference between Knowledge and Knowing

The key difference between knowledge and knowing can be understood by following points:

1) Knowledge is the plane theory and knowing is the practical experience.
2) Knowledge is an intellectual process while knowing is a spiritual/emotional process.
3) Knowledge comes from acquiring information while knowing comes from ownership.

1.3.3. Different Ways of Knowing

All knowledge comes from somewhere. The ways of knowing are what they sound like, the methods through which knowledge becomes apparent to us. There are different ways of knowing:

1) **Language:** It is defined as a system of signs with meanings. These signs include, but are not limited to letters, pictures, symbols, sounds and gestures. Language is everywhere; some aspects of it may even be universal. Language is really important for communicating knowledge, despite its flaws.

2) **Sense Perception:** It is the process by which we can gain knowledge about the outside world. This Way of Knowing relates to the way a person uses and understands their senses. Traditionally these people have thought that we only have five senses namely, touch, taste, smell, hearing and sight. However, as time has passed more and more senses have been suggested. Other senses that it has been claimed that people have include the sense of heat, sense of pain, of movement, of balance and of hunger and thirst, even a sense of where our body parts are in space has been suggested. Some of these might seem a little unusual.

3) **Emotion:** There are two important views of emotion that tend to come-up in theory of knowledge. One is called the naturalistic view of emotion. This view tells us that emotion is a result of our physical bodies, with physical causes and effects. **Charles Darwin** was one supporter of this view. One interesting implication of the naturalistic view is that emotions are seen as universal and experienced across cultures. The opposite view to this is that of social constructionists.

4) **Reason:** Reason allows us to go beyond the immediate experience of our senses. It is closely linked to logic—the deducing of valid conclusions from given starting points or premises. Human reasoning can also be inferential in nature, allowing conclusions to be drawn that cannot be strictly deduced from their premises. It then becomes an interesting question of whether standards of rationality and norms of reasoning are grounded in culture. Areas of knowledge might set their own requirements for the types of reasoning that are accepted. Inductive reasoning is the process of supporting general statements by a series of particular ones—the reverse of deductive reasoning which tends to proceed from the general to the particular.

5) **Imagination:** It is often identified in a narrow sense as the capacity to form a mental representation of something without the stimulus of sense experience. Traditionally, imagination has been associated with imagery and making a mental image of something. However, more recently interest in the imagination has also focused on exploring propositional imagining, or "imagining that". The importance and power of the imagination is highlighted by a number of medical conditions which impact upon it, e.g., conditions which can impair imagination such as severe autism, or conditions which can cause delusions such as severe schizophrenia.

Imagination is sometimes viewed in a broader way as being associated with creativity, problem-solving and originality. Here it might be the making of connections between otherwise disparate ideas in order to solve problems. This might be useful in model making or theory creation in the sciences and solving structural problems in the arts. Imagination is, however, also sometimes distrusted in part because it is regarded as something that is derived in the mind of the individual and therefore subjective. Imagination is also sometimes associated with possibility, in that it can be argued that only things which are possible can be imagined. In this way, the imagination is seen by some to provide evidence of what is and is not possible. In daily life, imagination has a particularly prominent role in entertainment, e.g., fictional films or television programmes. However, it can be argued that imagination also plays a deeper role, e.g., in moral education, developing empathy, or providing opportunity for self-expression and an increased understanding of the self.

6) **Faith:** The term "faith" is most frequently used to refer specifically to religious faith, but it can also be used in a secular sense as a synonym for trust. Although most associated with belief in a God or gods, faith can be religious without being theistic, e.g., in Buddhism. Alternatively, it can be seen as a commitment to a particular interpretation of experiences and reality which is not necessarily religious at all, such as humanism. Logical positivism claims that statements of faith have no meaningful cognitive content, so it does not make sense to speak of faith as a way of knowing. However, for many people faith is a key way in which they try to understand and explain the world.

The evidence on which faith is based on is often controversial. This is particularly the case in the example of scripture, which those within the religious group often see as infallible evidence, while those outside the religious group might be more circumspect. While critics argue that faith is irrational and incoherent, others would argue that faith should be seen as a way of going beyond reason rather than being purely irrational. Indeed, although faith is often contrasted with reason, many religions regard faith and reason as interdependent, e.g., natural theology argues that it is only possible to access God through reason, and many religions regard reason as a God-given gift.

Some would argue that the criticism and controversy surrounding the evidence for faith claims is misplaced, arguing that faith is an act of trust and is an example of knowledge which is not evidence based. Indeed, in some traditions belief that is not based on evidence is seen as superior to belief that is based on evidence, the demand for concrete evidence being seen to signify a lack of faith. Given this controversy, teachers should provide the opportunity for a critical discussion of faith as a way of knowing. Its inclusion as a way of knowing should not be seen as an excuse for unthinking acceptance of knowledge claims in religion or other areas of knowledge.

7) **Intuition:** It is sometimes described as immediate cognition, or knowledge which is immediately evident without prior inference, evidence or justification. Intuition is often contrasted with reason, as it is regarded as knowing without the use of rational processes. **Jung** famously referred to intuition as perception via the unconscious, highlighting the idea that intuition is often seen as beliefs which are known without understanding how they are known. Intuition is sometimes associated with the concepts of instinct and innate knowledge. **For example,** some would argue that although we do not have innate knowledge of any particular language, we have an intuitive capacity to use language. Intuition has been much discussed in the field of ethics in terms of whether we have moral intuition, or a kind of innate sense of right and wrong. It is also seen by someone to play an important role in scientific advances.

   To know something by intuition is to know something through introspection or an immediate awareness. In this way, some argue that it is impossible to justify, or that as it is immediately evident it requires no further justification. Some people are regarded as more intuitive than others, with intuitive people often being said to make quick instinctive decisions without having any identifiable rationale for those decisions. However, some have denied the existence of intuition as a separate way of knowing. **For example,** it has been suggested that intuition is a term which is often used to describe a combination of other ways of knowing, such as prior experience, heightened sense perception and an active imagination.

8) **Memory:** Many discussions of knowledge tend to focus on how beliefs and knowledge are formed rather than on how they are remembered by the individual. However, most of the knowledge that individuals have is in the form of memory and therefore how we retain information and how past events and experiences are reconstructed is an important aspect of how personal knowledge is formed.

   Memory, and particularly habit, has a strong link to procedural knowledge and remembering how to perform actions. In contrast to perception, memory refers to things which are not currently happening. And in contrast to imagination, memory refers to things which we believe really happened. Some would argue that memory is not itself a source of knowledge, but

instead is a process which we use to recall knowledge gained in the past. However, although memory refers to knowledge gained in the past, it can be argued that even new knowledge is dependent on and influenced by memory. **For example,** how we interpret new situations can be heavily influenced by experience and previous events. In this way, apart from being a "storage unit" for existing knowledge, memory can also be a mechanism that allows us to process new and unique situations.

The importance of memory can be highlighted by imagining the challenges that would be presented by losing our memory. Because so much of our personal knowledge is in the form of memory, issues surrounding the reliability of memory are also crucial. Memory retrieval is often regarded as unreliable, e.g., because it is seen to be subjective or heavily influenced by emotion. However, we rely on our memory every day and because many of our memories seem to be reliable, this gives us confidence that our other memories are reliable.

1.3.4. Patterns of Knowledge/Knowing Framework

According to Carper (1978), basic knowledge in a discipline proceeds through pattern recognition and development in the areas of:

1) **Empiric knowing:** It is based on the assumption that what is known is accessible through the physical senses, particularly seeing, touching, and hearing, and as a pattern of knowing draws on traditional quantitative approaches to knowledge acquisition. Empiric knowing is expressed as scientific competence, i.e., competent action grounded in scientific theories and knowledge.

2) **Ethical knowing:** It involves making moment-to-moment judgments about what ought to be done, what is good, what is right, and what is responsible. Ethical knowing guides and directs conduct in life and work, helps one determine what is most important, where to place one's loyalty, and what priorities demand advocacy.

3) **Personal knowing:** It concerns the inner experience of becoming a holistic, authentic self-capable of unifying the plural dimensions in which that self-lives in an honest and open manner. Full awareness of the self, the moment, and the context of interaction with others makes possible meaningful, shared human experience.

4) **Aesthetic knowing:** It involves deep appreciation of the meaning of a situation and calls forth inner creative resources that transform experience into what is not yet real, bringing to reality something that would not otherwise be possible.

If knowledge within any one pattern is not critically examined and integrated within the whole of knowing, uncritical acceptance, narrow interpretation, distortions, and partial utilisation of knowledge occurs. When the patterns are used in isolation from one another, the potential for synthesis of the whole is lost.

The formal expressions of knowledge are developed by using methods of inquiry that are grounded both in discursive scholarly methods and in practice specifically designed for each pattern. Patterns of knowing are also demonstrated in their non-discursive forms as synthesised learning and performance, which offers an ever-expanding base for building knowledge and skill throughout a lifetime.

Developing knowledge patterns is critical to all levels of education. Knowledge acquisition, comprehension, and application, together with the skills of integration, analysis and synthesis, essential for a well-prepared graduate, are threaded through the patterns of knowing. Learning these essential skills and abilities through the framework of patterns of knowing will achieve the desired outcomes. Moreover, given that knowledge and course content are changing rapidly a focus upon the patterns of knowing present in every discipline, regardless of content provides for a sound general education model in the 21st century.

1.3.5. Relative Roles of the Knower and the Known in Knowledge Transmission and Construction

Knowledge is the understanding about the relationships; the relationship of the knower with the known. In other words, it is the relationship of the subject with the object. Knowledge is the result of knower's active engagement with the object of knowledge. Knowledge and its intensity depend on the relationship between the knower and the known. Further, knowledge is understood in terms of enlightenment.

As such, epistemology deals with two fundamental problems of, knowledge-origin of knowledge and validation of knowledge. The discussion on origin of knowledge focuses on the relative roles of knower and the known in the making of knowledge. In the process it generated wealth of knowledge on both ways and forms of knowing and knowledge. In order to know the origin of knowledge, it is required to focus on process of how we come to know. Process of coming to know begins with knower's (the subject) engagement with to be known (the object). The knower's engagement and relationship begins with his/her contact with to be known. The contact takes place through senses in a context- physical, biological, socio- cultural and others.

1.3.5.1. Role of Knower (Teacher) in Knowledge Transmission and Construction

Teaching is a profession which must renew itself constantly in order to keep pace with current changes. The role of teacher may be taken on by anyone, e.g., when showing a colleague how to perform a specific task. Generally teachers play a significant role in various teaching learning situations such follows:

1) **Teacher as a Transmitter of Knowledge:** The teacher's primary function is to break information and skill into small increments, present them part-to-whole in an organised fashion, and then reward student behaviours that mirror the reality presented by teachers and texts. For the **teacher as**

transmitter, classroom activity might include responding to questions in a chapter, taking notes from a lecture, or responding to cues provided by a computer. They act in following way:

i) **Act as an Explorer:** They explore an issue, topic, discipline, etc., to develop/discover new knowledge, either formally or informally.

ii) **Act as a Guide:** They support students in the learning process by providing cues, promoting reflection, and strengthening insights; this may be a meta-role which underlying other roles (e.g., lecturer, reviewer, resource, and explorer).

iii) **Act as a Lecturer:** They present knowledge and information to students via lectures/ presentations.

iv) **Act as a Scholar:** They answer questions and/or direct thinking based on his or her discipline-based research; implicitly assumes a commitment to sharing findings with a larger disciplinary community.

v) **Act as a Speaker:** They provide information about an issue or topic in a more general, less structured or specific fashion than a lecturer.

2) **Teacher as a Role Model:** The role of model means that what the teacher says does or demonstrates in class serves as a model for students to follow and learn from, and teachers adopting this role perceive their behaviour to be influential to student development.

They serve as an example to learners of a successful professional in a field, a standing to which they might aspire themselves. The importance of a teacher as a role model has been documented extensively. Pupils tend to emulate from their teachers in the course of teaching and learning process. They act as a role model in following way:

i) **Act as an Observer:** They observe what the students do especially in oral activities to be able to give useful individual and group feedback.

ii) **Act as a Consultant:** They answer or address a few major issues or concepts as an expert.

iii) **Act as a Designer:** They establish an instructional framework that promotes learning.

iv) **Act as a Reviewer:** They critically evaluate and provide feedback on students' work to increase their understanding of a topic or field.

3) **Teacher as a Facilitator:** A teacher is a facilitator in the learning and teaching process. In the past the teacher was considered the only source of knowledge, but nowadays the orientation is different. Instead the teacher is not considered to be the only source of knowledge but rather a facilitator in the learning process. The teacher is nowadays considered just as a facilitator. They act as:

i) **Learning Facilitator:** Facilitating professional learning opportunities among staff members is another role of teachers. When teachers learn with and from one another, they can focus on what most directly improves student learning. Their professional learning becomes more relevant, focused on teachers' classroom work, and aligned to fill gaps in student learning.

ii) **Facilitation of Understanding:** Facilitative teaching seeks to help students, construct meaning and come to an understanding of important ideas and processes. Teachers in this role guide student inquiries into complex problems, texts, cases, projects, and situations.

iii) **Enricher:** Playing-off the flipped classroom model, the teacher's role could shift to providing enrichment activities beyond the scope of the automated system.

iv) **Content Creator:** One role that teachers already have –unless their curriculum is standardised- is that of content creator. This is actually one of the most important functions that educators at all levels perform, and one for which they are well trained.

4) **Teacher as a Negotiator:** Negotiation skills refer to the ability and willingness to discuss critical issues in a calm and open way so as to build consensus or agreement based on mutual understanding without taking advantage of either side. This provides a way out of difficulty situations.

They act in following way:

i) **Negotiating with Students:** Every classroom has challenging days, and learnings to negotiate with students through all of their emotional ups and downs helps teachers stay balanced, focused and in control. Establishing clear policies, procedures and expectations at the beginning of each term will help cut down on conflicts.

ii) **Negotiating between Students:** Conflicts in the classroom often arise between students, and teachers can find themselves mediating to keep control. Modelling strong negotiation skills along the way prepares when conflicts need to be dealt with. If possible, remove the two students from the situation that is causing the conflict; have them step outside with you to cut down on escalation in the classroom. Make sure to provide a task that will keep the other students busy.

iii) **Negotiating with Parents:** Teaching requires good communication skills, including when negotiating with parents when they feel their child has been treated unjustly. Make yourself available to communicate with parents at any time during the school days, not just at conference time. Provide an e-mail address and voice-mail number where you can be contacted at any time.

iv) **Negotiating with Other Professionals:** An often surprising place where negotiation skills are important for teachers is when communicating with other educators. Classrooms, multipurpose rooms, computers and supplies must be shared in equitable ways, and teachers can find themselves at odds with each other during busy times of the year. To keep professional relationships positive, learn to communicate in encouraging ways during staff meetings.

5) **Teacher as a Co-Learner:** The modern day academics have been demanding freedom from the clutches of business mindset and will not survive if education is continued to be treated as a factory for resource creation.

Becoming a co-learner can help in the survival of the teacher. Controlling the students can be easy and guiding them will be more fruitful. Students will be more ready to consult and collaborate with you. Teacher as a co-learner act in:

i) **Learning and Creativity:** Teachers use subject matter expertise to facilitate and inspire creativity in students, including inventiveness, problem solving, and reflecting, through the use of digital tools, collaborative tools, and co-learning experiences, i.e., teachers learning alongwith their students.

ii) **Assessment:** Teachers couple authentic learning experiences with assessments for evaluations so that students set their own goals for learning, engage in personalised learning, and are evaluated based on multiple and varied formative and summative assessments aligned with content and technology standards.

iii) **Digital Age Skills:** Teachers exhibit fluency in digital tools, engage regularly in technology-based collaboration and communication, and use information resources to support research and learning.

6) **Teacher as a Manager:** The teacher as a manager might model strategies for chunking information, encourage students to build connections using advance organisers and concept maps, and eventually help students to acquire techniques for regulating their own thinking processes. By managing an environment in which students gain experience at consuming information and asking questions about it, teachers help students to develop their own independent abilities to review historical materials.

Teacher as a manager act in following ways:

i) **Act as an Organiser:** Teacher should be able to organise students to do various activities.

ii) **Act as a Resource Handler:** Teachers can be one of the most important resources students have when they ask how to say or write something want to know what a word or phrase means.

iii) **Act as a Controller:** Teacher is incharge of the class and of the activity Teacher-fronted classroom.

1.3.5.2. Role of Known (Learner) in Knowledge Transmission and Construction

The role played by learner in different learning situations as a knowledge transmitter is described below:

1) **Act as an Apprentice:** Learners are engaged actively in learning activity. They develop knowledge of a field by working in it under the direction of an expert.

2) **Act as a Builder:** They construct the knowledge products designed into an activity by the instructor, the products could be discrete (e.g., a diagram, an essay) or collective (e.g., a website, an e-portfolio).

3) **Act as a Case Study Worker:** Learners are assessed as a part of daily learning through a range of activities including dialogue and interaction with peers and teachers, practical investigations, performances, oral presentations, and discussions. They analyse case studies to identify and understand the underlying principles and practices implicit in the cases.

4) **Act as a Context Explorer:** They gain an understanding of how others view on a given issue or problem by exploring the context they bring to the process their facts, emotions, motives, personal standards, behaviours, etc.

5) **Act as an Independent Researcher:** They use a self-directed, systemic, discipline-based process to collect, analyse, and interpret knowledge or information.

6) **Act as a Listener:** They listen for details and concepts in order to increase his or her knowledge.

7) **Act as a Peer Mentor:** They support fellow learners over time by guiding / assisting them with their development as learners (discipline-specific and / or general).

8) **Act as a Peer Teacher:** They gain a deeper understanding of a topic or field through the preparation and interaction involved in teaching other students.

1.4. CONTRIBUTION OF TEACHERS IN ASSIMILATION AND DISSEMINATION OF INFORMATION AND KNOWLEDGE

Assimilation is a cognitive process that manages how we take new information and incorporate that new information into our existing knowledge. This concept was developed by **Jean Piaget**, a Swiss developmental psychologist who is best known for his theory of cognitive development in children. **For example,** when a young child learns the word dog for the family pet, he eventually begins to identify every similar looking canine as a dog.

The child has extended his learning, or assimilated the concept of dog to include all similar 4-footed friends. Assimilation of knowledge occurs when a learner encounters a new idea, and must "fit" that idea into what they already know. The teacher functions as an independent variable in order to influence student's achievements. Teacher effectiveness appeared to be associated strongly with the following clusters:

1) Student initiated behaviour,
2) Whole class instruction,
3) General clarity of instruction,
4) Availability of information as needed,
5) A non-evaluative and relaxed learning environment which is task focused,
6) Higher achievement expectations, and
7) Classrooms that is relatively free from major behavioural disorders.

More successful teachers represent differences between addition and subtraction of problems on the basis of the action in the problem and the location of the unknown. They organised their knowledge on the basis of the level of the children's understanding of the problem in context. Even though some researchers have concluded that textbooks determine the content addresses in classrooms others provide evidence to challenge that assertion.

Research suggests that teachers are gatekeepers who make their own decisions about which parts of a textbook to use and which ways to use them and such decisions may not necessarily lead to close adherence to the textbook material.

1.4.1. Role of a Teacher in Knowledge Construction

There are different paradigms of knowledge. The impact of these paradigms on teaching and learning in the classroom can be understood by following points:

1) **Transmission of Knowledge:** This is a traditional view of education that some student may remember from their own school days. The emphasis is given by basic and essential skills but social skills are not given emphasis. The focus is on logical, objective, and abstract learning.

   Examples of this approach include:

   i) Multiplication tables learnt by rote, and

   ii) Learning the names of the capital cities of the world without having any real knowledge and understanding of the wider significance of this knowledge.

   This is objective learning because the learner's role is distinct from that of the teacher. Children and young people are assessed by their teacher according to their ability or intelligence, and a view once taken often remains fixed. Children may well then define themselves in terms of this assessment. Their learning is non-negotiable.

   They learn what others deem is significant and are assessed on the quantity of knowledge they have retained. The mastery of skills and the ability to learn for its own sake are attributes that are not valued, despite being vital to the contribution these children will make to society as adults.

2) **Construction of Knowledge:** This approach draws out knowledge and understanding. The learner is supported in actively constructing his or her store of knowledge through activities such as discovery learning and open-ended questioning. This type of learning is often based on everyday experiences and is a social experience using people around the learner to make connections and to gain new insights.

   Examples of this approach are:

   i) **Formative Assessment:** Feedback helps learners to see what they can do differently next time.

ii) **Research:** children and young people identify what they need to know and find sources to extend their knowledge.

iii) **Investigative Activities:** investigations are designed to enable young people to find their own patterns and relationships.

Here the teacher is not the transmitter and the learner the receptor. The teacher facilitates the learners, who are responsible for their own learning. However, the teacher remains the expert and the pupil is the novice. The learner develops through experience and can make informed judgements. Social and emotional factors are recognised but cognitive development is still the major focus.

3) **Co-Construction:** This expands on the construction of knowledge approach but shifts the focus from the individual to collaboration with others in building knowledge. Learners work together to investigate, analyse, interpret and reorganise their knowledge. They need to become adept at reflecting on their learning and its application in areas of their lives. This approach takes account of the emotional aspects of learning, the dynamics of learning with others, the significance of the context and the purposes, and effects and outcomes of learning.

Examples of this approach are:

i) Problem solving in groups, and
ii) Dialogue among learners and between the teacher and learners that focuses on learning.

In this approach, feedback and reflection become part of the learning process. The ability to communicate effectively about group relationships is also essential. The teacher instigates a dialogue among and with pupils based on common experience. The roles of teacher and pupil are shared and boundaries become unclear. Learning is seen as complex, multidimensional and involving everyone.

1.4.1.1. Knowledge under Construction

Constructivism is a view of learning based on the belief that adolescents adjust prior knowledge, or mental models, to accommodate new experiences as the brain actively seeks connections with what it already knows and makes meaning. This view supports the purposeful design of instruction that relates to adolescents' prior learning and experiences and that emphasises hands-on problem solving.

Teaching strategies promote student responses and encourage students to analyse, interpret, and predict information. These strategies include open-ended questions that promote extensive dialogue among students.

Perkins describes constructivism as a philosophy that promotes thoughtful learning in the classroom. He notes three basic learning premises that underline the constructivist instructional approach:

1) Knowledge and understanding are actively acquired. Depending on the situation, students might experiment, discuss, assume a role, debate, or investigate:
   i) In History class, students could describe an event during the French Revolution by writing a letter from the viewpoint of a French aristocrat to someone in another country.
   ii) In Language Arts class, students might relate a poem to an event in their lives.
   iii) In Science, students could gather samples from an estuary to test salinity composition and speculate about sea life and habitation.
   iv) In Maths, students might learn statistics by analysing beverage consumption data to determine the best market location for a new soft drink industry.
2) Knowledge and understanding are socially constructed in dialogue with others. The role of questioning and making thinking "visible" through response, helps teachers to determine adolescents' prior knowledge and ongoing understanding.
3) Knowledge and understanding are created and re-created. Adolescents are unlikely to develop understanding with one example or one experiment. Learning needs to be reinforced and applied in a variety of ways.

How can teachers facilitate and guide productive knowledge construction? How can the "couch potato" syndrome be shaken, inaccurate assumptions corrected, or complex principles, definitions, and procedures better understood? The ACT Model "Knowledge under Construction – The Mousetrap Catapult" provides an example. Students "construct" a better understanding of physics principles related to gravity, trajectory, velocity, and projectile motion through inquiry, experimentation, and reflective discussion.

Since many adolescents have misconceptions about natural phenomena related to these principles, this experience helps to dispel these naive assumptions. The metacognitive extension gives a structured time for students to reflect upon and process their learning, and to apply (and hopefully transfer) the principles to situations in real life. Ultimately, adolescents gain more accurate knowledge that leads to genuine understanding.

1.4.1.2. Role of Teachers in Knowledge Construction

In the constructivist classroom, the teacher's role is to prompt and facilitate discussion. Thus, the teacher's main focus should be on guiding students by asking questions that will lead them to develop their own conclusions on the subject. **Parker J. Palmer** (1997) suggests that good teachers join self, subject, and students in the fabric of life because they teach from an integral and undivided self, they manifest in their own lives, and evoke in their students, a capacity for connectedness.

David Jonassen identified three major roles for facilitators to support students in constructivist learning environments:

1) **Modeling:** **Jonassen** describes modeling as the most commonly used instructional strategy in constructivist learning environments. Two types of modeling exist, i.e., **behavioural modeling of the overt performance** and **cognitive modeling of the covert cognitive processes**. Behavioural modeling in constructivist learning environments demonstrates how to perform the activities identified in the activity structure. Cognitive modeling articulates the reasoning (reflection-in-action) that learners should use while engaged in the activities.

2) **Coaching:** For **Jonassen** the role of coach is complex and inexact. She acknowledges that a good coach motivates learners, analyses their performance, provides feedback and advice on the performance and how to learn about how to perform, and provokes reflection and articulation of what was learned. Moreover, she posits that coaching may be solicited by the learner or coaching may be unsolicited, when the coach observes the performance and provides encouragement, diagnosis, directions, and feedback. Coaching naturally and necessarily involves responses that are situated in the learner's task performance.

3) **Scaffolding:** It is a more systemic approach to supporting the learner, focusing on the task, the environment, the teacher, and the learner. Scaffolding provides temporary frameworks to support learning and student's performance beyond their capacities. The concept of scaffolding represents any kind of support for cognitive activity that is provided by an adult when the child and adult are performing the task together.

1.4.1.3. Knowledge Construction through Dialogue

Over the years dialogue has been used as a teaching tool, and other setting. Usually, in some place dialogue is used in a structured conversation void of conflict and anger. While in other situations it is being used as a problem solving technique. Dialogue entails partnerships relationship between students and teachers. Through dialogue, people are engaged in a practice to listen to different perspectives, promote cooperation, work on difficult issues, and build skills. Additionally, this open and inclusive process has significant long-term effects, however, not only for the individual or group that participate in the dialogue but it can also lead to organisational changes and community level changes. Thus, true dialogue requires developing efforts towards others, and consequently facilitates meaningful interaction between people and cultures. Students usually have to construct their own meaning to what they are taught regardless of how clearly teachers or books explain the texts.

Generally, a person does this by connecting new information and concepts to what he or she already believes. Compare to debate, dialogue emphasises listening to deepen understanding, invites discoveries, develops common values and allows contributors to express their own interests. Dialogue expects that the participants will grow in understanding and may decide to act together with common goals.

Teachers at different levels have embraced dialogue through critical approaches in linguistically and/or culturally diverse classrooms. Dialogue is a form of engagement, problem solving and education involving face to face, focus, and discussion occurring over time between two or more group of people defined by their different social dimensions. To promote the happening of a true dialogue individuals have to trust the learning group.

Freire (2003) defined dialogue as a "situation in which both, students and teachers exchange roles and learn from and with each other".

Dialogue is likely to occur within schools systems that engage teachers as reflective scholars and practitioners. The assumption that teachers can in fact create, design, and implement instructional changes is embedded within a perspective that views teachers as intellectuals and initiators of dialogic conversations.

1.4.1.4. Role of a Teacher

Critical teachers position themselves as filters of "top-down" decisions, content standards, and mandates that directly affect their students. **Howes (2002)** concluded that educators are more likely to develop effective, inclusive science instruction when they were aware of the "role schools play in perpetuating inequitable social structures".

Direct access to students' perspectives and socio-cultural background allow classroom teachers to contextualise education. These educators assume critical positions, read between the lines, perceive power implications of education reform movements, and question not only the "status quo", but their own practices. In doing so, they are able to perceive the dangers of becoming a humanistic teacher that neglects critical content or an advocate of critical content that follows authoritarian methods. In other words, "the teaching and learning of science ought to contain elements of action and change; learning is not just an academic task; it is about interacting with the world". This interaction is political by nature. It replicates relations of power in the wider society. **Peter McLaren** considered that the absence of dialogic conversations revolving around power and authority during science instruction must incite teachers to question their own schooling practices including how they engage their students in the intellectual task of reading, writing, speaking, using, and producing science; in order words – becoming science literate.

Through dialogue we explore the complexity of thoughts and language, we highlight how arbitrary our thoughts and perceptions are, and we become aware of our own bias towards thinking. Generally, critical dialogue stems from exposure to transformative academic knowledge and materialises in the form of conversations often sparked or extended by an educator that openly challenges the official versions of what students ought to know. Students in order to become engaged with science as a community of practice must find value in attending to the claims and evidence of classmates. Students must relate what they hear and

see with their own ideas. Knowledge from and through dialogue requires it to move back and forth from thoughts to speech and thus enhance learning.

i) **Interactive/Dialogic:** Teachers and students consider a range of ideas. If the level of interanimation is high, they pose genuine questions as they explore and work on different points of view. If the level of interanimation is low, the different ideas are simply made available.

ii) **Non-Interactive/Dialogic:** Teacher revisits and summarises different points of view, either simply listing them (low interanimation) or exploring similarities and differences (high interanimation).

iii) **Interactive/Authoritative:** Teacher focuses on one specific point of view and leads students through a question and answer routine with the aim of establishing and consolidating that point of view.

iv) **Non-Interactive/Authoritative:** Teacher presents a specific point of view.

Socio-constructivist perspectives on adult education, as well as many practitioners in the field assume that the teacher's interpersonal attitudes influence the process of knowledge construction on the part of the participants. Factor analysis led to the identification of four main interpersonal attitudes of the educators namely, favouring cooperation, directivity, flexibility, and focusing on the group. These attitudes were then correlated to indexes of the participants' levels of attention, participation and understanding.

1.4.1.5. Factors Involved in Dialogic Instruction

Key factors are needed in order to set-up dialogic instruction:

1) Classroom environment promotes collectively engaging and learning tasks together,
2) Classroom environment is reciprocal with all listening to each other and considering alternative viewpoints,
3) As ideas are articulated there is ample support for helping each other to reach common understandings,
4) Dialogic instruction is cumulative and collective as all build on their own and each other's ideas,
5) Classroom environment is relatively unpredictable because it is negotiated as teachers and students pick up on, elaborate, and question what students say,
6) Dialogical interactions involve fewer teacher questions and more conversational turns,
7) The teacher's voice is one of many voices, though likely a "critically important one",
8) Decisions are purposeful in that teachers plan well-defined educational goals in support of dialogue.

In all these ways of representing dialogic instruction, it is teaching and learning that goes well beyond the "two people talking" stereotype.

1.5. EXERCISE

1.5.1. Very Short Answer Type Questions

1) What is knowledge?
2) Define information.
3) Define knowing.
4) What do you mean by reasoning?
5) What is analysis?

1.5.2. Short Answer Type Questions

1) Explain nature of knowledge.
2) Describe different kinds/types of knowledge.
3) What is the difference between knowledge and information?
4) What is the difference between truth and belief?
5) Describe different ways of knowing.

1.5.3. Long Answer Type Questions

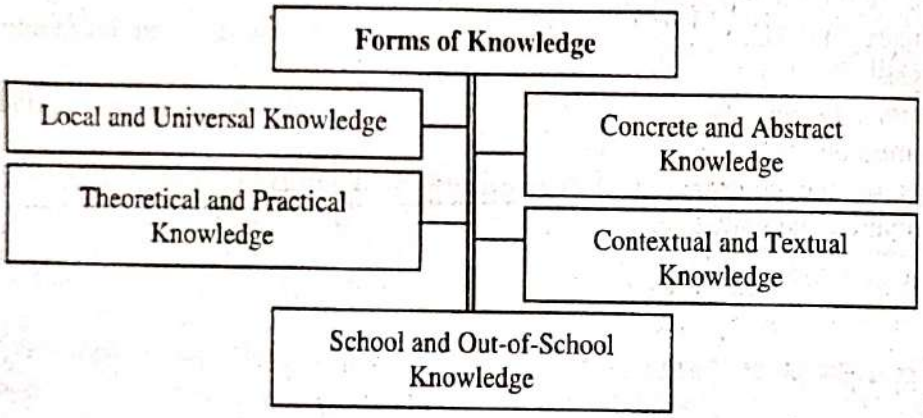
1) What are the various sources and kinds of knowledge?
2) What are the various methods of knowledge?
3) Compare and contrast between information and knowledge, and reasoning and analysis.
4) Discuss and describe relative roles of the knower and the known in knowledge transmission and knowledge creation.
5) Focus on the contribution of the teachers in assimilation and dissemination of information and knowledge.

UNIT 2

Different Facets of Knowledge and Relationship

2.1. FORMS OF KNOWLEDGE

Knowledge systems are dynamic, people adapt to changes in their environment and absorb and assimilate ideas from a variety of sources. However, knowledge and access to knowledge are not spread evenly throughout a community or between communities. People may have different objectives, interests, perceptions, beliefs and access to information and resources. Knowledge is generated and transmitted through interactions within specific social and agro-ecological contexts. It is linked to access and control over power. Differences in social status can affect perceptions, access to knowledge and, crucially, the importance and credibility attached to what someone knows. Following are the different forms of knowledge:



2.1.1. Local Knowledge and Universal Knowledge

Local knowledge is a collection of facts and relates to the entire system of concepts, beliefs and perceptions that people hold about the world around them. This includes the way people observe and measure their surroundings, how they solve problems and validate new information. It includes the processes whereby knowledge is generated, stored, applied and transmitted to others. Local knowledge is unique to every culture or society; elders and the young possess various types of knowledge. And, women and men, farmers and merchants, educated and uneducated people all have different kinds of knowledge. Local knowledge is the human capital of both the urban and rural people. It is the main asset they invest in the struggle for survival, to produce food, provide for shelter or achieve control of their own lives. Significant contributions to global knowledge have originated with local people, e.g., for human and veterinary medicine. Local knowledge is developed and adapted continuously to a gradually changing environment. It is passed down from generation to generation and closely interwoven with people's cultural values.

Universal knowledge is that which is known to be true everywhere in the Universe and all of the time. Physics and mathematics are the two primary fields of study related to this type of knowledge. It doesn't matter where you are or what your situation is, you can rely on mathematics to remain stable. Equalities will always be equal. All of the functions of mathematics remain constant all the time as a new approach. Universal knowledge is a completely new approach that can be defined as meta science or knowledge over knowledge. This phenomenon does not imply any division and treats everything at the appropriate level in accordance with the principles of hierarchy of levels at which the reality has its own individuality. Its range is limited neither up nor down. The upper limit of the Mata science does not exist, because in connection with the formation of ever new realities takes place development of the universal knowledge itself. The lower limit lacks as well because emergence of new realities entails deposition of the old ones (used) on the lower and lower levels.

Difference between Local Knowledge and Universal Knowledge

The difference between indigenous knowledge and global knowledge is given under following table:

Table 2.1: Local Knowledge *vs.* Universal Knowledge

Basis of Differences	Local Knowledge	Universal Knowledge
Meaning	Local Knowledge generally refers to the matured long-standing traditions and practices of certain regional, indigenous, or local communities. It also encompasses the wisdom, knowledge, and teachings of these communities.	Universal knowledge generally refers to the matured long-standing traditions and practices of regional, indigenous, or communities of the world as a whole. It also encompasses the wisdom, knowledge, and teachings of the entire world.
Characteristics	It is characterised as the unique, traditional, local knowledge existing within and developed around the specific conditions of women and men indigenous to a particular geographical area.	It is characterised as the unique, traditional knowledge existing within and developed around the specific conditions of women and men indigenous to the geographical area of the whole world.
Scope	Indigenous Knowledge is the local knowledge – knowledge that is unique to a given culture or society. It contrasts with the international knowledge system generated by universities, research institutions and private firms.	Universal knowledge is knowledge that is common to all cultures or society. It contrasts with the international knowledge system generated by universities, research institutions and private firms.
Basis	It is the basis for local-level decision-making in agriculture, health care, food preparation, education, natural resource management, and a host of other activities in rural communities.	It is the basis for decision-making in agriculture, health care, food preparation, education, natural resource management, and a host of other activities in whole of the world communities.

Importance	Indigenous knowledge is the information base for a society, which facilitates communication and decision-making..	Universal knowledge is the information base for the whole world, which facilitates communication and decision-making.
Assumption	It is assumed to be the truth.	It is assumed to be a best approximation.
Teaching and Learning	Teaching through story telling.	Learning by formal education.
Method	Oral or visual, and written.	Written
Nature	It is subjective in nature.	It is objective in nature.

2.1.2. Concrete Knowledge and Abstract Knowledge

Concrete knowledge is arriving at a conclusion having obtained absolute, conclusive evidence. Knowledge that cannot be refuted, e.g., 2+2=4. This is concrete knowledge.

Abstract knowledge is a level of thinking about things that is removed from the facts of the "here and now", and from specific examples of the things or concepts being thought about. Abstract thinkers are able to reflect on events and ideas, and on attributes and relationships separate from the objects that have those attributes or share those relationships. Thus, **e.g.**, a concrete thinker can think about this particular dog; a more abstract thinker can think about dogs in general. A concrete thinker can think about this dog on this rug; a more abstract thinker can think about spatial relations, like "on". A concrete thinker can see that this ball is big; a more abstract thinker can think about size in general. A concrete thinker can count three cookies; a more abstract thinker can think about numbers. A concrete thinker can recognise that Ram likes Shyam; a more abstract thinker can reflects on emotions.

2.1.3. Theoretical Knowledge and Practical Knowledge

Theoretical knowledge teaches the why? It helps to understand why one technique works whereas another fails. It shows you the whole forest, builds the context, and helps you set strategy. Where self-education is a concerned theory prepares you to set a direction for your future education. Theory teaches you through the experience of others. Theoretical knowledge is knowledge of why something is true. A set of true affirmations (factual knowledge) does not necessarily explain anything. In order to explain something, it is necessary to state why these truths are true and for this an explanation is required. Theoretical knowledge can often lead to a deeper understand of a concept through seeing it in context of a whole and understanding the why behind it.

Practical knowledge helps you acquire the specific techniques that become the tools of your trade. It sits much closer to your actual day-to-day work. There are somethings you can only learn through doing and experiencing. Where theory is often taught in the ideal of a vacuum, the practical is learned through the reality of life. Practical knowledge can often lead to a deeper understanding of a concept through the act of doing and personal experience.

2.1.4. Contextual Knowledge and Textual Knowledge

Contextual knowledge define as all the knowledge that is relevant and can be mobilised to understand a given situated decision problem. By "situated" we mean in given, dated, well specified circumstances. Contextual knowledge is evoked by situations and events, and loosely tied to a task or a goal. However, when the task becomes more precise (e.g., an event occurs), a large part of this contextual knowledge can be proceduralised according to the current focus of the decision making. Although the contextual knowledge exists in theory, it is actually implicit and latent, and is not usable unless a goal (or an intention) emerges. In our definition, contextual knowledge is a sub-part of the overall context.

Textual knowledge refers generally to the process of extracting interesting and non-trivial information and knowledge from unstructured text. Use of textual knowledge is to discover and use knowledge that is contained in a document collection as a whole, extracting essential information from document collections and from a variety of different sources. Textual knowledge lets executives ask questions of their text-based resources, quickly extract information and find answers they never imagined.

2.1.5. School Knowledge and Out of School Knowledge

Agencies of education are also described as active or passive form of knowledge. **Active agencies** are those which provide education through personal interaction and mutual participation, i.e., **School Knowledge**. In this case, education becomes a **two-way process**, the educator and educand influencing each other. **For example**, the family, the school, the play-group, the youth organisations are active agencies as they provide interaction among the participants. These agencies also inculcate good qualities like cooperations, fellow-feeling, competitive spirit, adaptability and emulation. They are, therefore useful for citizenship training and growth of leadership qualities.

The **passive agency** of education is a **one-way process**, where there is no interaction and mutual give and take. This form of gaining knowledge is known as **Out of School Knowledge. For example,** the films, radio, television and press influence the behaviour of people without being influenced themselves. The listener listens to the radio programmes and gets knowledge, information or happiness or sorrow. Knowledge from schools and knowledge from experience have the same source, which is the real life. While experience is, what people get from the world around them, and books are records of it.

2.2. CULTURE AND KNOWLEDGE

Knowledge is embedded in social and cultural structures that may be place dependent and not easily replicated mechanically. Culture, practice, and community are concepts which can usefully describe these structures in which knowledge is embedded. These structures must be successfully created and maintained mechanically, if the information society vision of making distance irrelevant is to be fulfilled.

2.2.1. Culture

Culture refers to the core beliefs and customs of a particular group of people, and it can be observed in many aspects of their lives, such as their language, food, clothing, religious ceremonies, symbols and history. In many cases, culture is associated with family origins, race, ethnicity and geographic location, but culture can also be gained by choosing to identify with a specific group.

Culture is a learned way of behaviour that is transmitted from generation to generation. Moreover it is shared by a group and historically accumulates over a period. Therefore, it is said to have a historical growth, which is linked with the past and the future. There are certain norms, values and beliefs in any society that are culturally determined and socially transmitted. Culture is an essential part of human being. No one is completewithout it, in fact, an individual can be part of many cultures and subcultures.

2.2.2. Elements of Culture

Culture is made-up of some elements which are essential for a culture. These elements of a culture are described below:

1) **Material Culture:** Material culture refers to the objects or belongings of a group of people such as automobiles, stores, and the physical structures where people worship. It also divided into two parts:
   i) **Technology:** Technology refers to the techniques or methods of making and using things. It includes the techniques used in the creation of material goods. It is the technical know-how possessed by the people of a society.
   ii) **Economics:** Economics is the manner in which people employ their capabilities and reap the resulting benefits. Included in the subject of economics are the production of goods, and services, their distribution, and means of exchange and the income derived from the creation of utilities.

2) **Social Institution:** Social institutions including family, educational institutions, political structure, and the media that affect the ways in which people related to one another, organise their activities to live in harmony with one another, teach acceptable behaviour to succeeding generations and govern themselves. This social institutions are:
   i) **Family:** Family is one of the most important social institutions. The concept of family differs from country to country.
   ii) **Educational Institutions:** They help the process of transmitting skills, ideas, and attitudes as well as training in particular disciplines.
   iii) **Political Structure:** The political structure may stress single person rule, government by a few or government through single or multiple party systems.
   iv) **Media:** Culture has been greatly influenced by the media. In the perspective of our country newly introduced various private satellite channels have brought significant changes in our culture.

3) **Humans and the Universe:** It includes:

i) **Religions:** Religion is one of the most sensitive elements of a culture. It is the guiding force defining human kind's relationship with super natural and in determining a culture's values and attitudes. Religion affects people's habits, their outlook on life, the products they buy, the way they buy them, and even the newspapers they read.

ii) **Belief System:** Belief system differs from culture to culture. Too often, one person's beliefs are another person's funny story. It is a mistake to discount the importance of myths, beliefs, and superstitions or other cultural beliefs.

4) **Aesthetics:** Aesthetics refer to the ideas in a culture concerning beauty and good taste, as expressed in the arts, music, drama and dance and the appreciation of colour and form. Aesthetics are of particular interest to the businessmen because of their role in interpreting the symbolic meanings of various methods of artistic expression, and standards of beauty in each culture.

5) **Language:** The importance of understanding the language of a country cannot be overestimated. The successful businessmen must achieve expert communication which requires a thorough understanding of the language as well as the ability to speak it? Language differs from one culture to another culture.

2.2.3. Relationship between Culture and Education

Culture strongly influences how an individual approaches education, and a society's culture determines how that society educates its citizens. Because culture consists of values and beliefs that influence practices, students are more likely to engage in education that aligns with and includes their cultural identity. An increasing number of schools are approaching curriculum building with culture in mind.

Education is an instrument of cultural change. Education can impart knowledge, training and skills as well as inculcate new ideas and attitudes among the young. Thus, culture plays an important role in the life of a person. To understand the nature of its importance, it will be easy to understand how education of various elements of culture can help a person. It can be seen in the following manner:

1) **Adaptation to the Natural Environment:** Everywhere man lives in a definite natural environment to which they adapt themselves. Without adaptation he/she cannot survive. All the inventions and experiments that he/she make in the process of this adaptation form an important part of the culture. Differences in the natural environment of different communities pave the way for differences in their cultures. In all the tribes of India, the members of the community behave in a particular way which is adapted by the coming generations of the particular community or tribe. It is this mode of behaviour which makes up culture.

2) **Adaptation to the Social Environment:** Culture includes customs, traditions, beliefs, etc. All of these help the individual to adapt to his social environment. It must be kept in mind that all these elements undergo gradual changes as the social environment changes. Culture determines the patterns of social control, through which the individual is subjected to remain attached to that group. Hence, the advantage in communicating the culture of the group to the child through education is that he/she is thereby acquainted with the traditions, customs, values and patterns of conduct prevailing in his group. This knowledge enables him to adapt to social environment and thus achieve his socialisation.

3) **Development of Personality:** The personality of the individual is manifested through his pattern of behaviour. The behaviour is always influenced by the culture of his/her group. Culture influences the physical, mental, moral, social, aesthetic and emotional aspects of individual. Thus, the behaviour of the individual is greatly influenced by the culture.

4) **Society and Need for Schooling:** Society is very keen that its young members should not lapse into barbarity and ignorance. Whatever, it has attained in social, cultural, religious and other fields it feels its bounden duty to transmit it to the next generation. As the society has become more complex and knowledge is piling up, it feels the need of formal education and thus society starts schools to educate its members. The purpose is if two-fold:
   i) To transmit cultural heritage, and
   ii) To improve the society.

5) **Transmission of Cultural Heritage:** To perpetuate present progress we should transmit the cultural heritage. Only physical reproduction is not sufficient; we should equip the new generation with our attainments in all fields of life. Here, we should exploit the innate tendencies, needs and interests of the children for the purpose of education. Our education should also be in consonance with the mental 'make-up' of the students.

6) **Improvement of the Society:** Without improvement the society will stagnate. Education is not only to reflect the social conditions but also to improve them. With the advancement of science and technology our ways of life are also undergoing tremendous changes.

   If we would not cope with the present advancement there would be 'cultural lag'. We must adjust ourselves with the fast changing world. So education must adapt itself to the changing conditions. We shall have to guard ourselves against the tendency of the schools to import everything new in the society.

7) **Role of the School:** The school has to give up its ivory tower isolation. It must be closely linked with the society. "The starting point of educational reform must be the relinking of the school to life and restoring the intimate relationship between them which has broken down with the development of the formal tradition of education," recommends the Secondary Education Commission.

8) **School as a Community in Miniature:** School is a social institution which has been established by the society for the purpose of transmitting among its members, those ideas, beliefs, attitudes and dispositions that will make them

worthy members of the society. Schools are to be the reflection of the larger society outside its will in which life can be learnt by living. The school is to be looked at not as a place where traditional knowledge is inculcated as authoritative but as a place where experiments in life are carried on and where other experiments in life be read about and told about because of their results by which alone they are to be judged and not by their prestige.

2.2.4. Impact of Culture on Educational Institutions

The aims and ideal of the educational institutions are influenced by the values and patterns of the society.

1) **Curriculum:** The curriculum is prepared according to the culture of society. The system of education tries to realise the cultural needs of society through curriculum which conditions all educational activities and programmes.

2) **Methods of Teaching:** Culture and methods of teaching are intimately connected. The changing cultural patterns of a society exert its influence upon the methods of teaching. Previously teaching was teacher centred where teacher used to give knowledge to the child. Now it has become student centred. The teacher considers the needs, interests, aptitude, attitude, inclinations, behaviour, etc., before teaching. In this way education is a method of preparing child for the future for effective living. In short, we can say that cultural and social conditions generate the methods and techniques of teaching in a powerful manner.

3) **Discipline:** Cultural values influence the concept of discipline. The present cultural patterns of thinking and living are directly linked to our concept of discipline where the democratic values are accepted all over the world.

4) **Text Books:** Curriculum is contained in the textbooks. Textbooks are written according to the formulated or determined curriculum. Only those textbooks are welcomed which foster and promote cultural values and ideals.

5) **Teacher:** Each individual teacher is imbibed with the cultural values and ideals of the society of which he/she happens to be an integral member. Only such teacher achieves his/her missions successfully. They infuse higher ideals and moral values in children.

6) **School:** Schools is a miniature of a society. The total activities and programmes of a school are organised according to the cultural ideas and values of the society which establishes and organises the school. Hence, school is the centre of promoting, moulding, reforming, and developing the cultural pattern of the society.

2.2.5. Impact of Education on Culture

Just as the culture influences education, in the same way education also influences culture of a country. It can be seen in the following manner:

1) **Preservation of Culture:** Every country has a distinct culture of its own. Hence, it tries to preserve its culture and its distinctiveness in its original form. Education is the only means through which this task can be accomplished. Thus, education preserves the culture of a society.

2) **Transmission of Culture:** The process of preservation includes the process of transmission from one generation to another. The famous sociologist **Ottaway** has rightly remarked 'The function of education is to transmit social values and ideals to the young and capable members of the society.'

3) **Development of Culture:** The function of education is to bring the needed and desirable changes in the cultural ideals and values for the progress and continued development of the society without which social progress cannot takes place. Through education an individual modifies cultural processes by research and deeper investigations into all areas of human requirements.

4) **Continuity of Culture:** Culture is a life breadth of a society. Without which a society is bound to decay. Education upholds the continuity of culture through its diverse activities and programmes. A society establishes schools to preserve and transmit its culture to the coming generations. Children should be motivated to learn more and more from cultural interaction among various cultures. Thus, cultural integration and assimilation will enrich the composite culture of a society.

5) **Development of Personality:** Education aims at developing the personality of a child. It employs diverse cultural patterns of thinking, behaviour and cultural values so that children are physically, mentally, morally, socially and intellectually develop with the development of society to the maximum extent.

6) **Removal of Cultural Lag:** While material cultural develops at a faster speed due to scientific and technological inventions of non-material culture consisting of ideas, values and norms lags behind and create a gulf between the two. Education is the only means by which these gaps can be bridged.

Thus, education and culture are interdependent and complementary to each other. However the existing system of education in India has not evolved from its own culture. There is a need that education should be related to our own culture.

2.2.6. Role of Culture in Knowing

Culture plays very crucial role in knowing anything such as:

1) In the conceptual area the relationship is characterized by reciprocity and knowledge defines culture and culture defines knowledge.
2) Culture influences the appreciation of processes such as knowledge sharing, development or retention. This type of relationship between culture and knowledge gets most attention in the knowledge management literature.
3) Culture influences the way knowledge processes develop in the organisation. This relationship is different in that it concerns which forms how knowledge processes take, and not whether or not they come about. Culture guides the interaction between people. Culture influences vertical knowledge sharing i.e., knowledge sharing in the hierarchy.
4) The degree of knowledge sharing depends on culture (in masculine, individualistic cultures the importance of knowledge sharing is less automatically recognized. Culture influences the contents of the knowledge sharing process (in an informal network organisation knowledge sharing

develops substantively different than in an organisation with a formal, and closed culture). Knowledge sharing can be more difficult between groups in an organisation with clearly distinguished cultures then in organisations that have a strong, and uniform culture.

5) Culture is an element of the organizational context in which knowledge sharing takes place. This context stipulates how and when knowledge is shared. This fourth relationship concerns an indirect relation between culture and the knowledge sharing process. Culture, **e.g.,** plays a role in defining the acceptability of a specific organisation structure, which in turn influences knowledge sharing.
6) Culture plays an important role in the management model an organisation embraces. In other words, culture affects the acceptance of actively managing knowledge processes by other stakeholders than the knowledge workers themselves.
7) Culture guides the way an organisation implements its management given an existing management model. In other words, culture stipulates the focus and style of management as well as actual selection and interpretation of interventions aimed at influencing how individuals and groups deal with issues of knowledge. It also stipulates the chances of success of actually specifying and taking management measures, e.g., culture contributes to defining which interpretation of an intranet will effectively promote knowledge sharing.

2.2.7. Ways of Knowledge Rendered into Action

Following ways may be considered in rendering knowledge into action:

1) **Telling Others about Learned Knowledge:** When a person spread the word about what they have learned, then they are not only introducing others to a new topic, but also reminding themself of what they have learned. Every time they repeat it, and ingraining the idea more and more into their mind. The more they tell others, the more likely they will be able to remember it. It is the fact that the more you remember anything, the greater the chance that you'll put the ideas into action.

2) **Taking Notes about Learning:** Just like you used to (or still) do in school, taking notes on what you read is a great way to commit ideas to memory and to gain a better understanding of them. After you learn something, write it down somewhere. Make a list of what you want to do, add the action you want to take to your To Do list, or schedule time on your calendar to focus on your new course of action. Putting it in writing will make it more concrete and make it more likely that you'll actually follow through.

3) **Incorporate Ideas into Your Routine:** If you want to practice something or explore new knowledge in an action-oriented way, find a way to incorporate it into your daily (or, at the very least, weekly) routine. Take action, first thing in the morning if you can to make sure that you don't end up putting it off later in the day. If you need a little motivation, ask a friend or partner to take action with you. If you make your action part of your routine, you'll be a lot more likely to stick with it. Share your knowledge by spreading the word to others – family, friends, or colleagues. This accomplishes two things– you get to share

your understanding with others, possibility introducing them to a new concept or topic. And, by talking about it, you build confidence about what you've learned and allow it to become more ingrained in your mind. Take action by incorporating your knowledge into your life. Implement a concept you've learned into your daily life. Put something new into practice at work. Make a new routine at home. Don't be afraid to ask others for motivation to help you.

4) **Post Reminders of Ideas Everywhere:** Whoever invented the sticky note was a genius. You can write anything you want on those little pieces of paper and put them anywhere. Write a phrase (or a few phrases) that will remind you to take action and post it everywhere. Post it in your car, on your mirror, in your office, on your fridge—anywhere you will be likely to look and be reminded of the action you want to take.

5) **Keep Learning About the Topic:** The more you learn about a subject, the more space it takes up in your mind. (I'm not sure if this is a fact, but it seems to be that way in my experience.) The more space something takes up in your mind, the harder it is to forget about it. Therefore, it's best to keep learning more about what you want to be knowledgeable about. The more you learn, the more you'll think, and the more likely you'll put these thoughts into action.

2.2.8. Emerging Problems Relating to Knowledge

The nature of education, of research, and of knowledge itself is being questioned and reshaped to respond to the challenges of our technologically enhanced and information based society. Knowledge is the key to the universe, and it is the key that opens doors to possibilities, it is also the key that unlocks the mysteries of our world knowledge is the key that reveals as endless sea of discoveries. Knowledge serves as an essential component. The emerging problems relating to knowledge are as follows:

1) **Explosion of Knowledge:** Knowledge, sometimes we call information or subject content is acquired as a result of man's interaction with the universe. Naturally, it gets accumulated and multiplied, widening the boundaries of every discipline or form. This possesses a problem to curriculum and textbook planners and developers as it requires the inclusion of the latest information and making the curriculum and textbooks up-to-date.

2) **Plurality of Knowledge:** With the added knowledge acquired, the original fields or disciplines or subjects of the curriculum are branching themselves into new fields. Since each expert focuses upon a significant aspect of knowledge, one feels tempted to include more or more subjects in the curriculum and textbooks. This leads to the selection of subjects

3) **Integration of Knowledge:** The present day tendency is integration of knowledge or unity of knowledge as against separation. This needs an integrated approach to subjects.

4) **Interdisciplinary Approach:** The interdisciplinary approach to knowledge cuts across several disciplines to explain any aspect of human environment.

5) **Several Specialisations:** With the multiplication of the accumulated knowledge, the issue of specialised knowledge and general knowledge crops up.

2.3. EPISTEMOLOGY

2.3.1. Introduction

The word **Epistemology** has been derived from the **Greek** word **'episteme'**, which means 'knowledge'. Epistemology is the branch of philosophy which is concerned with the theory, nature and origin of knowledge. Epistemology studies the nature of knowledge, the rationality of belief and justification. The term was first used by Scottish philosopher **James Frederick Ferrier** in 1854. He coined epistemology on the model of **'ontology'**, to designate that branch of philosophy which aims to discover the meaning of knowledge, and called it the 'true beginning' of philosophy.

2.3.2. Meaning of Epistemology

Generally speaking, epistemology deals with the 'nature' of knowledge and not 'how to' of the knowledge. It is also called the principle of knowledge. In other words, what is the relationship between truth and reality? It involves an awareness of certain aspects of reality, and it seeks to discover what is known and how it is known. Epistemology addresses cognitive sciences, cultural studies and the history of science. Moreover, epistemology explains why our minds relate to reality and how these relationships are either valid or invalid. It is needed in order to distinguish between the truth and falsehood as we obtain knowledge from the world around us.

Epistemology studies the **nature** and **scope** of **knowledge** and **justified belief**. It analyses the nature of knowledge and how it relates to similar notions such as **truth**, **belief** and **justification**. It also deals with the means of **production of knowledge**, as well as **scepticism** about different knowledge claims. It is essentially about issues having to do with the **creation** and **dissemination** of knowledge in particular areas of inquiry.

Epistemology asks the questions like:

1) How do we know, what we know?
2) What is knowledge?
3) How is knowledge acquired?
4) Is knowledge possible?
5) Can knowledge be certain?
6) What do people know?
7) What are the necessary and sufficient conditions of knowledge?
8) What is its structure, and what are its limits?
9) What makes beliefs justified?
10) How we are to understand the concept of justification?
11) Is justification internal or external to one's own mind?
12) What we know?
13) How can we know it?
14) Why do we know some things, but not others?
15) How can we differentiate truth from falsehood?
16) Why do we believe certain claims and not others?

The kind of knowledge usually discussed in Epistemology is propositional knowledge. 'knowledge-that' is opposed to 'knowledge-how'. **For example**, the knowledge of 2 + 2 = 4 is opposed to the knowledge of how to go about adding two numbers.

2.3.3. Epistemology and Education

Many educational systems and practices revolve around the transmission and construction of knowledge (teaching, learning, research, etc.) The ideas that we have about what knowledge is and how it is constructed, shape the way we structure our educational institutions, our pedagogical practices, and our curricula. Epistemology in education also has strong implications for issues of social justice/injustice. When evaluating educational problems or practices around the world, being able to identify the epistemology that shapes a particular practice can be really useful. It can help us to understand where potential problems may lie, and what factors of that practice might be contributing to social injustice or to social justice.

Epistemology as a Discipline

Epistemology is a discipline. In this regard **Aristotle** said that philosophy begins in a kind of wonder. Almost all human beings wish to comprehend the world they live in, and many of them construct theories of various kinds to help them make sense of it. Because many aspects of the world defy easy explanation, however, most people are likely to cease their efforts at some point and to content themselves with whatever degree of understanding they have managed to achieve.

Unlike most people, philosophers are captivated some would say obsessed by the idea of understanding the world in the most general terms possible. Accordingly, they attempt to construct theories that are synoptic, descriptively accurate, explanatorily powerful, and in all other respects rationally defensible. In doing so, they carry the process of inquiry further than other people tend to do, and this is what is meant by saying that they develop a philosophy about these matters.

Like most people, epistemologists often begin their speculations with the assumption that they have a great deal of knowledge. As they reflect upon what they presumably know, however, they discover that it is much less secure than they realised, and indeed they come to think that many of what had been their firmest beliefs are dubious or even false. Such doubts arise from certain anomalies in our experience of the world.

2.3.4. Issues in Epistemology

The major issues in epistemology can be classified into five areas:

1) The fundamental relationship between consciousness and reality,
2) The nature and validity of sense-perception,
3) The nature of concepts and the relation between abstractions and concrete particulars,
4) The nature and validation of axioms, especially the laws of identity and causality, and
5) The nature of certainty and truth as characteristics of conceptual knowledge.

2.3.5. Educational Implications of Epistemology

Educational implications of epistemology are as follows:

1) **Purpose of Schooling:** Promotes spiritual and intellectual development; Produce competent and self-actualised adults who become useful citizens of the state.

2) **Curriculum:** Stresses the eternal ideas of the past (great works of literature, philosophy, politics, history and the art). Preferred methods of instruction-lecture, discussion, reflection and the Socratic Method (dialogue).

3) **Nature of Learner:** Every student has a mind, soul, and spirit capable of emulating the absolute mind, and absorbing ideas from books and teachers.

4) **Role of Teacher:** Role model with logical thinking and reasoning; and are authority with extensive knowledge about the great books.

Implications for Educators

The implication for educators is that the information and knowledge we attempt to transmit to our students in the classroom is not fixed but is constantly subjected to critical evaluation, refinement and revision. But this means our students would be better off learning how to conduct their own inquiries, how to critically evaluate their findings, and how to refine and revise them. The main objectives of education should be the following:

1) To teach students how to decide whether a particular piece of information counts as genuine knowledge or whether it is no more than the best guess we can come up with at the moment. (What is knowledge?)
2) To teach students how to determine whether a particular piece of information has been acquired in the proper ways, whether there are good reasons to think that it is correct or whether there are good reasons to think that it could be false after all, even though there is strong evidence for it. (What are the best and most secure ways of acquiring knowledge?)
3) To teach students how to determine what the goal of inquiry is in a given situation and to evaluate whether a particular piece of information or knowledge is worth having. (What is the value of knowledge?)

It is true that we know things. But what is the nature of what you know? Does it properly reflect reality (truth)? Is knowledge primarily gained through our sense experiences (empiricism)? Is knowledge primarily gained through reason (rationalism)? There is a priori knowledge or knowledge that is automatically known apart from experience and posteriori knowledge or knowledge that is gained from experience.

Epistemology encompasses the construction of concepts, the nature of conditions and the validity of the senses. Without epistemology, human beings would have no reason to believe in their thoughts and actions. Teachers would have no reason to give tests or assign class work because there would be no difference between truth and error. We need epistemology in order to accept reality and live our lives in successful pursuit of truth.

2.4. EPISTEMOLOGY OF INDIAN PHILOSOPHIES

2.4.1. Introduction

Philosophy is considered as the root of all knowledge. It is considered as mother of all sciences. Philosophy has interpreted man and his various activities in a comprehensive manner. It helps to coordinate the various activities of the individuals and the society. It helps us to understand the significance of all human experience. It explores the basic source and aims of life. It asks and tries to answer the deepest questions to life. It clarifies life and the basic values of life. This clarity is very essential because it provides us with the wisdom to face the challenges of life. Philosophy is the rational attempt to have a world-view. It endeavours to reach a conception of the entire universe with all its elements and aspects and their interrelations to one another. It is not contented with a partial view of the world. It seeks to have a synoptic view of the whole reality. There are the two main philosophical basis of knowledge – the Indian and Western philosophies. These two bodies describe the whole fundamental aspects of knowledge that comes from various sources and which becomes leading principle of life.

2.4.2. Philosophical Basis of Knowledge According to Indian Philosophy

Philosophy in Sanskrit means **'Darsana'** which refers to the ancient philosophical traditions of the Indian. Indian philosophy presents a variety of opinions regarding the source of cognition or pramanas. The schools of Indian philosophical thought are classified as either orthodox or heterodox it means **Astika or Nastika:**

1) **Astika (Orthodox):** Astika means one who believes in the authority (testimony) of the Vedas. It can be explained that astika means a theist or one who believes in God. Astika here does not mean one who believes in rebirth. All the six Brahmanical systems **(Mimamsa, Vedanta, Sankhya, Yoga, Nyaya and Vaisesika)** accept the Vedic authority and are therefore called astika. This class includes six systems of Indian philosophy which are collectively known as **Sad Darsan.**

2) **Nastika (Heterodox):** Nastika means an atheist or one who does not believe in God. Nastika (heterodox) school has three systems – the **Carvaka, Buddha** and **Jaina.** All these are Non-Vedic Schools. The Nastika system of Jaina and Buddha also believes in rebirth. According to Manu, nasitka is a person who challenges the authority of the Vedas. However, there are other methods of classification; Vidyaranya, e.g., identifies sixteen schools of Indian philosophy by including those that belong to the Saiva and Raseśvara traditions.

The main schools of Indian philosophy were formalised chiefly between 1000 BCE to the early centuries of the common era. Competition and integration between the various schools was intense during their formative years, especially

between 800 BCE and 200 CE. Some schools like **Jainism, Buddhism, Yoga, Saiva** and **Advaita Vedanta** survived, but others like **Charvaka** and **Ajivika** did not survive.

Ancient and medieval era texts of Indian philosophies include extensive discussions on ultimate reality (Metaphysics, Brahman-Atman, Sunyata-Anatta), reliable means of knowledge (Epistemology, Pramanas), value system (axiology) and other topics. Classical Indian philosophy is an unbroken tradition of reflection expressed in the subcontinent intellectual language of Sanskrit. Or, we should say it is comprised of interlocking traditions since there are the distinct schools, all nevertheless using Sanskrit and engaging with the other schools.

Later authors expand and carry forward positions and arguments of their predecessors. Following are considered main philosophical schools of Indian philosophy:

1) Nyaya,
2) Vaisesika,
3) Sankhya,
4) Yoga,
5) Mimamsa,
6) Vedanta, and
7) Advaita Vedanta.

2.4.3. Nyaya

The Nyaya School was founded by sage **Gautama**. Sixteen major topics were discussed in this system, the most important of which is **pramana**, the source of valid knowledge. Actually, Nyaya is a school of logic, and all other schools of Indian philosophy use the Nyaya system of logic, in whole or in part, as a foundation for philosophical reasoning and debate. Navya-Nyaya or Neologic, a further development of this school occurred in the 16th century in Bengal and Mithila.

The Nyaya defines the scope of epistemology to include in it valid knowledge, sources of knowledge, tests and criteria of validity. **According to Nyaya,** knowledge is essential not only as adventitious property of the self. Nyaya defines that all knowledge is a revelation or manifestation of objects. Just as a Lamp manifests physical things placed before it, so knowledge reveals all objects which come before it. **According to Nyaya-Vaisesika,** knowledge is not only about objects but also about itself. It can't turn back on itself and cognise its own existence, for less its own validity, hence no knowledge can be the test of it's our truth.

Nyaya's fundamental definition of knowledge is phenomenological. Knowledge is cognition, apprehension, consciousness or manifestation of objects. In Nyaya philosophy, cognition (buddhi) is taken to mean the same thing as apprehension (upalabdhi), knowledge (jnana), and cognition (pratyaya).

It seems knowledge means awareness of apprehension of objects. Gautama uses the terms 'jnana' and 'upalabdhi' as definite synonyms of 'buddhi', sufficient for understanding the nature of knowledge. Nyaya being realistic believes that knowledge reveals both the subject and the object which are quite distinct from it.

Nyaya is the science of correct knowledge (pramana sastra). Nyaya states that all knowledge implies the subject (pramatra), object of adequate knowledge (prameya) the resulting cognition (pramiti) and the means of knowledge (pramana). These are four important aspects of epistemology:

1) **Subject (Pramatra):** Knowledge involves a subject or knower, having certain attributes. It is the substantive ground of all cognitions. The Pramata is self-conceived as an intelligent agent. It is independent because it exists for itself and is an end to itself. It is that which knows and strives, enjoys and suffers, remembers and expects, it is an agent, a striver, a desirous, and a refused. It is the subject of an adequate knowledge.

2) **Object (Prameya):** Prameya is the object of adequate knowledge. Valid knowledge implies some prameya or object, to which the process of knowledge refers or to which it is directed. To know an object we need means of knowing it. Every knowable object has some characteristics and attributes. It is just a search light that reveals the object.

3) **Cognition (Pramiti):** It is the resulting state of cognition and the piece of adequate knowledge.

4) **Pramana:** It is the means of valid knowledge. It is the distinctive cause or instrument of valid knowledge (prama-karanampramanam). Pramana means the instrument of valid presentative knowledge (yathartha-anubhava). The instrument (karana) is a form of cause (karna). It is not compulsory that any and every cause (karana) is an instrument. Only the most efficacious (sadhakatama) of the cause is called akarna. Akarna is that which the most efficacious (sadhakatama) is of the causes. Thus, though the knower (pramata) and the object known (prameya) too are considered as pramana because these are not instruments or the most efficacious ones of the causes of valid knowledge. Pramana is a mental function which leads to correct knowledge; to achieve this object, it should be free from doubt and error, and should relate to what is not already known.

No valid knowledge is possible without the study of the pramana's. All schools of Indian philosophy regards ignorance as the root cause of human suffering. So, true knowledge is necessary to overcome or minimise sufferings of the human beings. **Vatsyayana** commenting upon the first Sutra of Gautama says that the study of the pramana's is necessary, because through it alone we can properly know reality and thereby guide our actions so as to attain desirable ends and avoid sufferings. Although four aspects equally deserve same consideration, the pramana is told as the most important. The supreme importance of Pramana amongst the four objects is due to its being the direct cause of real knowledge. The later Naiyayikas, however, use the term 'Prama', the term 'Pramana', 'Pramiti', 'Premeya' and 'Pramanya', however, as current in old Nyaya as in the latter, so valid knowledge is Prama.

2.4.4. Vaisesika

Kannada is the founder of this school, which is associated with the Nyaya system. This school discusses seven major topics:

1) Substance,
2) Quality,
3) Action ,
4) Generality,
5) Uniqueness,
6) Inherence, and
7) Non-existence.

This school is called Vaisesika because it considers uniqueness as an aspect of reality and studies it as a separate category. Under the topic of substance, it deals with the physics and chemistry of the body and the universe. The theory of atomic structure was established by this school. Its practical teaching emphasises dharma, the code of conduct that leads man to worldly welfare and to the highest goal of life.

2.4.5. Sankhya

According to Indian philosophical history, the Sankhya is one of the oldest philosophical schools. This school of thoughts has its roots in Indian Vedic knowledge. Sankhya is the essence of the Vedas. This philosophy is believed to be founded by Maharishi Kapil. Sankhya philosophy begins with the knowledge of nature and its origin. This school is comparable to Yogic school of thought and also similar to Nyaya School of Philosophy. Knowledge is the modification of mind. Knowledge process in Sankhya, where mind goes towards the object.

Sankhya is a dualistic philosophy that believes in the co-existent and interdependent realities, conscious **Purusha** and unconscious **Prakrti**. Purusha is ever pure, wise and free but it becomes a subject of pain and pleasure when it identifies itself with Prakrti. Prakrti is the material cause of the universe and is composed of three gunas – sattva, rajas and tamas; that correspond to light, activity and inertia respectively. The state in which the gunas are in equilibrium is called Prakrti but when disturbed the state is called Vikrti. Disturbance of the equilibrium of Prakrti produces the material world, including the mind, which is supposed to be the finest form of material energy.

Sankhya philosophy explains the dynamics of the body and nature of mind. It is the mother of mathematics as well as Ayurveda and is indeed the very basis of Eastern philosophy.

Sankhya states that all valid knowledge has the factors, namely:

1) The subject (pramata),
2) The object (prameya), and
3) The ground or source of knowledge (pramana).

The subject being a conscious principle is no other than the self as pure consciousness (suddha chetana). The modification (vritti) of the intellect, through which the self-known as object is called pramana. The object presented to be the self through this modification is the prameya. Prama or Valid is the reflection of the self in the intellect as modified into the form of the object because without the self's consciousness, the unconsciousness intellect cannot cognize anything. Valid knowledge as the mode of buddhi which apprehends an object is undoubted, real and not known before. The definition of prama in the Sankhya-Pravacana-Sutra, according to Vijnabhiksu, is thus the ascertainment of objects which are not already present in, or known to both (buddhi and purusa) or either of them.

2.4.5.1. Impact of Sankhya Philosophy on Education

Sankhya has great relevance for contemporary education. If we consider the modern view of education as development, then Sankhya's postulate that development is only the unfolding of what already has potential existence needs no modification to suit today's world. Sankhya's psychological views also reflect modern learning theories. If knowledge leads to the modification of buddhi in the Sankhya system then modern education aims at the modification of behaviour. If cognition is a function of buddhi or intellect in Sankhya, it is the formation of intellectual structure in modern education.

In detail the implications of Sankhya for modern education are discussed below:

1) **Aims of Education:** Sankhya states the ultimate aim as attaining the perfection of purusa through discrimination leading to its salvation. Thus, the aim of education should be to create discerning individuals capable of attaining the perfection that exists within them, as **Swami Vivekananda** also put it.

2) **Methods of Teaching:** The methods are clearly indicated:
   i) Thorough study of authorities but keeping an open mind and using reason to validate their theories,
   ii) Experiential learning with maximum involvement of the senses, and
   iii) Activity based learning including projects, practical work, etc. enabling the development of observation and logical reasoning.

3) **Curriculum:** The curriculum will involve the study of all disciplines, with stress on the natural sciences, since to understand prakriti is to discriminate between purusa and prakriti, and the arts, so as to develop an appreciation and understanding of the works of authorities. Physical sciences and the yoga will also form part of the curriculum since Sankhya believes only a healthy and focused individual can attain salvation.

4) **Discipline:** Sankhya recommends a high degree of discipline. One can deduce that it should be self-imposed.

5) **Role of Teacher:** The teacher is to be a facilitator of the development of the innate potentiality of the child.

6) **Place of Student:** Since Sankhya believes in the multiplicity of purusas, it follows that education must be individualised and child-centred.

7) **Religious and Moral Education:** It can be deduced that religious education will not have much importance but moral education involving the teaching of ethical values will definitely hold a central place in any system of education based on Sankhya.

2.4.6. Yoga

Yoga and Sankhya are allied systems. Although Yoga philosophy was known even in the Vedic and pre-Vedic periods, it was not formally systematised until it was codified by **Patanjali** in about 200 BC. The Yoga Sutras contain 196 aphorisms, which are divided into four sections. Yoga studies all aspects of human personality and teaches one how to control the modifications of the mind through practice of meditation and detachment and surrender to higher consciousness.

It prescribes a holistic system of practice beginning with the yamas and niyamas (ethical and behavioural codes) and proceeding through the asanas (physical postures), pranayama (breathing exercises), pratyahara (control of senses), dharana (concentration), dhyana (meditation) and culminating in samadhi.

In this system the individual self is the seeker and pure consciousness is the ultimate reality that he finds within. Practicality is the main feature of this system.

2.4.7. Mimamsa

Jaminiis known as the founder of this system. This system accepts the Veda as the final authority on all questions. It provides a comprehensive method for interpreting and understanding the underlying meaning of the Veda. It lays great emphasis on rituals, worship and ethical conduct and provides a systematic lifestyle and direction. Mimamsa offers guidelines for practical application of Vedantic theory. This school is foremost in the analysis of sound and mantra. The Mimamsa, like most other schools, admits two kinds of knowledge:

1) Immediate, and
2) Mediate.

According to Mimamsa, knowledge is an activity (mode) of the self and not a quality of the self as in the Nyaya. The soul is the enjoyer and the agent of karma. The soul is not atomic. It is described as an act (kirya) or process (vyapara). It is super sensible and is known only indirectly through inference and not directly through introspection as Nyaya Vaisesika points. It may be either mediate or immediate. Bhatta defines, cognition is formless. Knowledge reveals objects but it does not assume any form. Knowledge is judgment. It arises in the form of such judgment as 'this is a cup', 'this is a car', etc., but not in the form of pictures.

This school was divided into two groups:

1) **Purva Mimamsa:** The first school founded by **Prabhakara**. According to this school there are five sources of valid knowledge:
   i) Perception,
   ii) Inference,
   iii) Comparison,
   iv) Testimony, and
   v) Postulation.

   Purva Mimamsa accepts that an act of knowledge has four constituents:
   i) The knower,
   ii) The object of knowledge,
   iii) The instrument of knowledge, and
   iv) The result of knowledge.

   The Prabhakaras accept "Tri-Putti-Vitti" cognition, i.e., each cognition has three factors:
   i) The knower (self),
   ii) The known (object), and
   iii) The knowledge.

   The cognition "know this" has three presentations of
   i) I, the knower,
   ii) This, the object,
   iii) The cognition.

   The knowledge takes the following form:
   'I know the jar'; this knowledge takes the knower, i.e., soul, the object known, i.e. the jar and the knowledge.

2) **Bhatta Mimamsa:** The second founded by **Kumarila Bhatta**. According to this there is only one source of knowledge, i.e., non-cognition. In the Bhatta Mimamsa, Prama or true knowledge is defined as primary and original knowledge (anaclhigata). The method of knowledge must be conceived in what has not been previously known. So, memory cannot be prama or true knowledge.

   Mimamsa states that the knowledge of something which is not contradicted and which is novel is prama. Mimamsa defines that the root "prama' denotes real or actual experience. It constitutes the knowing of an unknown element. Thus, valid knowledge is that which gives knowledge of the meaning of an unknown element.

2.4.8. Vedanta

Vedanta was taught and practiced by the sages of the Vedas and Upanishads and was handed over through a long line of sages. **Veda Vyasa** is considered as the founder of Vedanta. He codified these teachings in the **Brahma Sutras**. Until the time of Sankara, Vedanta was mainly transmitted through oral tradition but

sometimes between the 6th and 8th centuries. A.D. Sankara reorganised the system of this monistic school of thought. After him numerous teachers wrote commentaries on the Brahma Sutras, interpreting it in various ways and thus establishing various schools within the single system of Vedanta. The major schools of Vedanta are:

1) Advaita (non-dualistic)
2) Dvaita (dualistic)
3) Dvaitadvaita (both dualistic and non-dualistic)
4) Visistadvaita (qualifies non-dualism)
5) Visuddhadvaita (pure non-dualism).

Of these schools Sankara's Advaita and Ramanuja's Visistadvaita are the most important. Sankara's Advaita Vedanta covers all the other systems. The main teachings of Vedanta is that self-realisation is the actual goal of life, that the essence of the self is the ever existent consciousness and bliss, the self is free from all qualifications and limitations, that the self is essentially Brahman, supreme consciousness and this Brahman is the absolute, transcendent, attributeless reality but it eternally embodies itself within itself the capacity or power called maya, which is the basis of mind and matter.

Advaita Vedanta

Sankara is considered as the main leader of Advaita. Advaita states that knowledge requires neither means nor any proof, since it is self-illumined and self-proved. Knowledge, i.e., self and Brahman occupy a prominent place in Advaita Philosophy, and epistemology has been given a subordinate place. Advaita Philosophy denies the reality of the truth of name and form as presented by the sense organs and so it can neither rely upon the knowledge given through sense, nor can it make any use of it to support its contentions, however helpful it may be, in common sense life. Hence, Samara recognises all means of knowledge and all knowledge acquired through them is unreal from the transcendental standpoint. But none can deny their importance in the practical world before one gets the transcendental knowledge.

Advaita defines knowledge as a blend of vrittias inspired by the saksin. The vritti element is contingent and the element of consciousness is eternal. It is divided into saksi-jnana and vritti-jnana. It may be either mediate or immediate. The 'that' of an object is known as mediate knowledge. In immediate knowledge, the 'What' is also revealed?

Immediate knowledge takes place when certain conditions are fulfilled. The object must be directly knowable (yogya); the object must be existent at the time and should be established by a certain intimate relation between the subject and the object. Advaita provides that valid knowledge is knowledge which possesses non-contradictions (abadhita) and novelty (or sometimes just the former). Advaita admits that knowledge is valid, sarvajnanam yathartham. The word pramana denotes the rightness and utility of any knowledge since it discriminates valid knowledge from invalid knowledge. Thus, pramana is right knowledge and its rightness is known by its use in any time.

2.5. EPISTEMOLOGY OF WESTERN PHILOSOPHIES

2.5.1. Philosophical Basis of Knowledge According to Western Philosophy

Western philosophy has ancient, medieval, and modern eras. The ancient era includes the work of Greek and Roman thinkers, some of whom were influenced by ideas developed much earlier in Egypt and Mesopotamia. During the ancient era Greek philosophy was the most creative. The Romans derived most of their thought from it and built upon it, but they did not add much that was new.

In the West, the early beginning of philosophy was in wonder, while the modern Western philosophy had its origin in doubt. This wonder and doubt gave rise to several types of problems.

Some examples of the philosophical problems are:

1) What is the real nature of man?
2) What is the end of this life?
3) What is the nature of this world in which he lives?
4) Is there any creator of this world?

These are some of the many problems taken at random, which we find agitating the human mind in every land, from the very dawn of civilisation. Western philosophy has removed more or less true to the etymological meaning of 'philosophy' in being essentially an intellectual quest for truth.

2.5.1.1. History of Western Philosophy

In the history of Western philosophy human knowledge about each of the different problems mentioned above began to grow, it became impossible for the same man to study everything about every problem. Division of labour or specialisation became necessary and a group of man devoted themselves to a particular problem or a few connected problems.

There came into existence in this way the different special sciences. Physics, Chemistry, Botany, Anatomy, Geology and similar sciences took up each a part or aspect of the world of nature. Physiology, Anatomy and the other medical sciences devoted themselves to the different problems of the human body. Psychology begans to study the problems of the human mind. The detailed study of many of particular problems with which philosophical speculation originally started became thus the subject matter of the special sciences. Philosophy then began to depend on the reports of the investigation made by the different sciences, tried to understand their meanings and implications critically, and utilized these results for understanding the general nature of the universe- man, nature and God.

Historians of philosophy have divided Western Philosophy according to their convenience. The Western Philosophy is mainly divided into ancient, medieval and modern philosophies:

1) **Greek Philosophy or Ancient Philosophy:** It covers a period between 600-400 A.D. This period is categorised in three sections:
   i) Pre-Socratic Philosophy,
   ii) Socrates, Plato and Aristotle, and
   iii) Greco-Roman Philosophy.

   The Ancient Greek philosophers have played a pivotal role in the shaping of the western philosophical tradition. The Ancient Greek philosophical tradition broke away from a mythological approach to explaining the world, and it initiated an approach based on reason and evidence. Initially concerned with explaining the entire cosmos, the Pre-Socratic philosophers strived to identify its single underlying principle. Their theories were diverse and none achieved a consensus, yet their legacy was the initiation of the quest to identify underlying principles.

   This sparked a series of investigations into the limit and role of reason and of our sensory faculties, how knowledge is acquired and what knowledge consists of. Here we find the Greek creation of philosophy as "the love of wisdom," and the birth of metaphysics, epistemology, and ethics. Socrates, Plato, and Aristotle were the most influential of the ancient Greek philosophers, and they focused their attention more on the role of the human being than on the explanation of the material world. The work of these key philosophers was succeeded by the Stoics and Epicureans who were also concerned with practical aspects of philosophy and the attainment of happiness. Other notable successors are Pyrrho's school of skepticism and the Neoplatonists such as Plotinus who tried to unify Plato's thought with theology.

2) **Medieval Philosophy 400-1500 A.D:** Medieval philosophy, though it made much use of Plato and Aristotle, was most heavily influenced by Christianity. It began about the 4th century with **St. Augustine** and ended in the 15th century. **Augustine** identified the eternal ideas of Plato with truths that come from God. This divine world of truth is encountered by turning the mind toward God's revelation. Augustine taught that the immortality of the human soul can be proved by its possession of eternal truths.

3) **Modern Philosophy (Bacon to Kant) Post-Kantian Philosophy:** Modern philosophy represents in most respects a break with thought dominated by Christianity. This fact, coupled with the great increase in scientific investigation, aided the breakup of philosophy into the many different subjects that are taught in schools today. The Renaissance, the rise of humanism, and the Enlightenment laid the foundation for the way philosophy has developed since 1500. From 1500 philosophy took so many twists and turns that it cannot be defined by any one approach. The ideas of Plato, Aristotle, and others still had to be dealt with but mostly for their relation to practical thinking. Metaphysics still had its advocates, as it does today, but many schools of thought denied its validity. After 1500 philosophy found itself in a world

characterised by the growth of cities, the appearance of new inventions, the refusal to accept God or the supernatural as explanations for reality, the invention of printing to spread ideas, the emergence of a new economic system called capitalism, the voyages of discovery to the New World, the Reformation that split Western Christendom, and a great fascination with the natural world and human abilities to exploit and understand it.

During the Renaissance a preoccupation with mathematics and natural science began that endured for two centuries. In the enlightenment era of the 17th and 18th centuries, attention turned to the nature of the human mind and its abilities to master the natural world. The two main philosophical points of view were rationalism and empiricism. Then, at the end of the enlightenment, appeared the work of Immanuel Kant, who tried to bridge the gap between rationalism and empiricism. With him the enlightenment ended and the 19th century began.

The decades of the 19th century were dominated by many differing currents of thought. The discovery of the irrational as an antidote to pure reason manifested itself in the discipline of Romanticism. New ideas appeared in political thought all over the world: liberalism demanded democratisation of the political process, while socialism demanded economic justice.

Early in the modern period **Francis Bacon** was an ardent advocate of the new learning. He held that knowledge cannot be based on accepted authorities but must begin with experience and proceed by induction to general principles. He helped lay the foundation for British empiricism, one of the main schools of modern philosophy.

Modern rationalism originated in the work of the Frenchman Rene Descartes. From the statement, "I think, therefore I am," Descartes proceeded deductively to build a system in which God and mind belong to one order of reality and nature to another. He saw nature as a mechanism that can be explained mathematically, while God is pure spirit. The reconciliation of these two orders of reality in a new metaphysics occupied many other philosophers, including Nicolas de Malebranche, Baruch Spinoza, and Gottfried Wilhelm Leibniz.

2.5.1.2. Methods of Western Philosophy

The different methods of western philosophy are as follows:

1) **Dogmatism:** This method of thinking consists in assuming certain "fundamental principles as self-evident and axiomatic, without explanation or proof, and deducing conclusions from these unproved premises". It also carries on its investigations without a previous criticism of uses. In other words without criticizing the quality of knowledge and without determining how we know things, it at once hastens to interpret the objects of the world. Hence in this method of thinking the mind is too busy with its objects to attend to itself. Descartes, Spinoza and Leibnitz may be mentioned as belonging to this line of thinking.

2) **Empiricism:** According to Empiricism, all knowledge, whether scientific or philosophical, is entirely built up of sensations and materials derived from sensations. It holds that the mind of every man at the time of birth is like a blank sheet of white paper (a tabula rasa) on which the impressions coming from the outside are imprinted in the form of experience. Bacon, Hobbes, Locke, Hume, Mill and Bain may be mentioned as the advocates of this school of thought.

3) **Scepticism:** It results from carrying empiricism to its most extreme and consistent form. Because, if we once admit that we can have no genuine knowledge beyond what can be compounded out of the materials of sensations and feelings, it follows that we cannot have any understanding realities outside of and apart from our own sensations and feelings, but also any certain knowledge that such things exist as all. Hence, our idea of substances, mind, matter and God cannot be known for certain to correspond to realities, existing independently of our ideas. Not only can we know nothing about the real nature of such meta-physical or transcendental realities, but also we cannot even know for certain that they have any existence. Hume, Mill, Bain, and Spencer are the advocates of this doctrine. In its extreme form, scepticism denies the certainty of all knowledge.

4) **Criticism:** Criticism is the method which bases all philosophical speculation upon a critical inquiry into the nature, origin and limits of knowledge. According to this doctrine, the true philosophical method must be critical. Before we enter into philosophy, we must hold a thorough inquiry into the antecedent conditions of knowledge and the precise filed and range of its operations. By thus ascertaining the scope of knowledge, criticism helps us in determining the range of philosophical investigations. Kant is a great advocate of critical method.

5) **Rationalism:** It is a method which consists in showing that sensations and feelings can only give the materials of knowledge and that such materials do not constitute knowledge unless they are interpreted by reason. Hence, according to this method of thinking, knowledge is a product not of experience alone, but of reason interpreting experience. Thus, this form of thinking gives a prominent place to reason and a subordinate one to sensations and feelings in the structure of knowledge. The Criticism of Kant, then, is a form of rationalism. Likewise some of the dogmatic systems may be regarded as forms of rationalism.

6) **Dialectical Method: According to Hegel,** the proper method for philosophy is dialectic. This is a natural method of philosophical thinking. It is a commonplace experience that when we think over a problem we arrive at certain positive facts; this is thesis. Now, after some time we come to know some facts which are contradictory to the thesis; this is antithesis. Thesis and antithesis cannot live together for long hence they are synthesised into a synthesis. This synthesis arrived through antithesis is more comprehensive than the original thesis. Thus, knowledge grows in a dialectical process through thesis, anti-thesis and synthesis.

7) **Modern Methods:** The Pragmatists adopt the pragmatic method. The New Realists adopt the method of intellectual analysis. **Bergson** adopts the method of intuition in regard to life, and of intellect in regard to matter. The Logical Positivists adopt the method of linguistic analysis and empirical verification. The naturalists adopt the naturalistic methods of observation and experiment. **Croce** and **Gentile** adopt the historical method.

2.5.2. Criticism of Indian and Western Philosophies

There are some similarities and differences between Indian and western Philosophies. Western philosophy pays more importance on experience and reason as the two vital sources of knowledge.

In treating experience, western philosophy tends to identify experience with perception but not in Indian philosophy. Strictly speaking the concept of a priori knowledge is not to be found in Sankhya philosophy. There is either not clear opposition between rationalism and empiricism. Testimony is acknowledged as a source of knowledge both in India and west, but the west pays much less stress on it compare to Indian philosophy.

Critically comparing will demonstrate that the epistemologies of both the Platonic and Sankhya systems incorporate the knowledge revealed by experiences originating in internal consciousness, that both systems present the philosophical activity as the means to recovering these experiences, and that both hold that this activity is a necessary one for man, given one's condition. One must admit that differences in cultural and social aspirations and intentions prevent these systems from being identical, but this is not what concern is here.

If knowledge is necessarily true, then perceptive knowledge must necessarily be true cognition. But it is an undesirable fact that occasionally we do make mistakes in our perceptual judgment. We tend to see things or object covered by our cultures and prejudices. This occurs in the mind of the observer and we can be certain of these.

Sankhya logic is built according to the psychological process involving in inference whereas Aristotelian logic deals more with the formed validity of arguments and not how reasoning is actually done. They make a clear distinction between the form and the validity of arguments and truth, but Sankhya logic makes not such clear distinction.

Sankhya inference deals with the formal and the material with induction and deduction at the same time. This logic has advantage that it reflects better the way we actually reason with clear remembrance of vyapti. It has disadvantage too. In western logic, **Hume** shows how acute the problem of induction is.

A special point to be noted here is that in Indian theory of testimony source of knowledge or **sabdapramana** and the western theory of **Hermeneutics** hold that understanding a sentence is to know the truth expressed in it.

2.5.3. Comparison between Indian and Western Philosophies

The comparison between Indian and Western Philosophies can be understood on the basis following points given in table:

Table 2.2: Comparison between Indian and Western Philosophies

Basis of Comparison	Indian Philosophy	Western Philosophy
Basis of Development	Indian philosophy follows a parallel horizontal development, various schools of philosophy have developed independently from each other, each complete in its own respect. **For example,** Buddhism, Jainism, Sankhya, Yoga school of thoughts are in themselves quite developed and are different from each other.	Western Philosophy follows a vertical development; it can be understood as the teachings of **Plato, Socrates, Epicurus, Aristotle,** leading to Rationalist and Empiricist Philosophers.
Aims	The main aim of Indian Philosophy is **liberation of the individual,** which means 'end to suffering or Nirvana'. All schools of Indian Philosophy except Charvaka give special emphasis to liberation.	The Western Philosophy is intellectual curiosity about Epistemology or Metaphysical aspects. No western philosopher can really claim to have achieved liberation.
Goal	Moksha or Nirvana is the end of life, and it is the goal of life in Indian philosophy.	Western philosophy's goal was to discover the grounds of scientific truth and the limits of man's ability to know it.
Combination of Religion	Indian philosophy is integrated with various religion, i.e., Hinduism, Islam, Buddhism, etc.	Western philosophy begins and ends with Christianity. Western philosophy is opposite and independent of religion.
Dependency	Indian philosophy is inner dependent.	Western philosophy is outer dependent.
Role of Human Being	A human being is an integral part of the universe and the society. People are fundamentally connected. Duty towards all others is an important concern. Collectivism is stronger.	A human being has an individualistic nature and is an independent part of the universe and the society. Individualism is stronger.
Status Quo	The fundamentals of the status quo should not be questioned. The culture of considering and introducing radical changes is weaker.	The fundamentals of the status quo can and often should be questioned. The culture of considering and introducing radical changes is stronger.
Venturing Capability	Entrepreneurial Creativity and venturing is contained by the habit to control one's passions. "Desires are the cause of suffering. If desire, which lies at the route of all human passion, can be removed, then passion will die out and all human suffering will be ended." **Buddhism.**	Entrepreneurial venturing is encouraged emotionally. "Nothing is ever achieved by reasonable men." – **J Fred Bucy of Texas Instruments.**

2.6. SCHOOLS OF WESTERN PHILOSOPHY

2.6.1. Introduction

Philosophy may be viewed as wisdom, as a reflective and critical (intellectual) attitude, or as discourses explaining and orienting different types of practices in a direct, explicit or more intricate way.

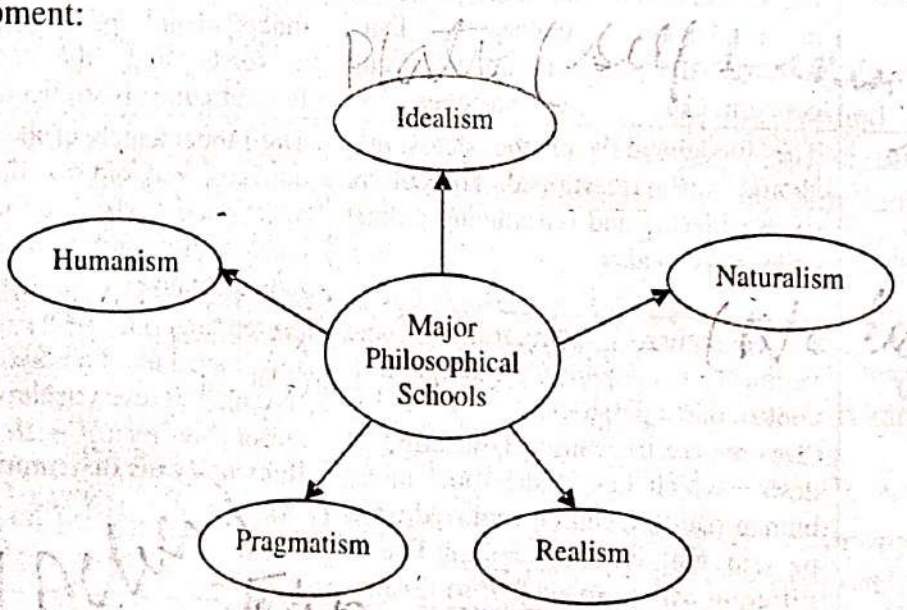
There are a number of ways in which the field of educational philosophy might be organised, whether for purposes of study or teaching. **For example,** one might study prominent philosophers who have something to say relevant to education, in their historical order (e.g., **Plato, Rousseau**); one might study prominent educational thinkers, whether philosophers or not, in a philosophical manner (e.g., **Pestalozzi, Freire**), or one might focus on particular branches of philosophy and their implications for education (e.g., moral philosophy and moral education, philosophy of science and science teaching).

Idealism, naturalism, realism, pragmatism, humanism, yoga, advaita, shankhya, etc., are some of major schools of thoughts. Each school of thought has at least one philosopher who would be considered the forerunner of the school. **For example,** Idealism is based on the early writings of **Plato**. Realism is based on the thinking of **Aristotle**.

Behind every school and every teacher there is a set of related beliefs about philosophy of education that influences what and how students are taught. A philosophy of education represents answers to questions about the purpose of schooling, a teacher's role, and what should be taught and by what methods.

2.6.2. Major Philosophical Schools

Generally, philosophy gives direction and meaning to action. Without philosophy there is no meaning for curricular decisions. Following are the major philosophical schools that have, *hitherto*, influenced educational development:



2.7. IDEALISM

2.7.1. Meaning and Definition of Idealism

The word idealism is derived from two distinct sources, namely, the idea and the ideal. 'Idea' means true and testified knowledge. The word 'Ideal' stands for the perfected form of an idea or ideas. An idealist does not have considerations for material values of life. A thinker who idolises 'Mind and Self' is an idealist.

Idealism is one of the oldest philosophical schools of thought, which is originated in human nature. It has its own basic principles that ideas are the only true reality, the only thing worth knowing. In a search for **truth, beauty and goodness** that is enduring and everlasting; the focus is on conscious reasoning in the mind.

Plato is called the father of Idealism. He stated this view about 400 years BC, in his famous book, **'The Republic'. Plato** believed that there are two worlds:

1) The first is the **spiritual or mental world**, which is eternal, permanent, orderly, regular and universal, whereas,
2) The second is the **world of appearance**, the world experienced through sight, touch, smell, taste, and sound, which is changing, imperfect and disorderly.

Plato described a utopian society in which "education to body and soul all the beauty and perfection of which they are capable" as an ideal. In his allegory of the cave, the shadows of the sensory world must be overcome with the light of reason or universal truth. To understand truth, one must pursue knowledge and identify with the absolute mind. **Plato** also believed that the soul is fully formed prior to birth and is perfect and at one with the Universal Being. The birth process checks this perfection, so education requires bringing latent ideas to consciousness.

According to Harold Titus, "Idealism asserts that reality consists of ideas, thoughts, mind or selves rather than materials, object and force."

According to D.N. Dutta, "Idealism holds that ultimate reality is spiritual."

According to F. Bruce Rosen, "The idealists believe that the universe has intelligence and a will, that all material things are explainable in term of mind standing behind them."

According to Herman H. Horne, "Idealism has the conclusion that the universe is an expression of intelligence and will, that the enduring substance of the world is of the nature of mind, that the material is explained by mental."

According to J. S. Ross "Idealistic philosophy takes many and varied forms, but the postulate underlying all this is that mind or spirit is the essential world stuff, that the true reality is of a mental character."

2.7.2. Characteristics of Idealism

Idealism is provoked from early time philosophy, which describes that the true reality of life lies within the ideas and there is nothing more significant for human life than an idea. Following are the principles that state its characteristics:

1) God is the supreme source of all the formations in the universe.
2) God is the only source that possesses all knowledge.
3) Mind and soul constitute the reality of life.
4) God is the creator of human beings, which is his best creation.
5) Human beings are spiritual and mystical in nature consisting of spiritual powers.
6) The knowledge, sense, insights, mental attitude or wisdom of the human beings determine the truth of life.
7) Physical universe or materials are virtual and fragile.
8) Only God and spirit are true, immortal and eternal.
9) Spiritual values are perpetual, static and imperishable.
10) Spiritual world has more importance than the physical world.
11) Idealism support and elevates human character.
12) Unlike animals, human beings are not the creation of the environment.
13) Reality exists in mind not in the physical environment.
14) Rational enlightenment is the source of true knowledge.
15) Knowledge, beauty and wisdom are the perpetual and essential values of human beings.
16) Idealism is the unity of diversities.
17) Idealism favours moral education rather than the common education.

2.7.3. Principles of Idealism

The fundamental principles of idealism are:

1) **Two Forms of the Whole World:** Idealism believes in two forms of the world, i.e., spiritual world and material world. Idealists give more importance to spiritual world in comparison to the material world. They believe that spiritual world is real and the ultimate truth whereas the material world is transitory and moral. **According to Horne**, "Idealism holds that the order of the world is due to the manifestation in space and time of an eternal and spiritual reality."

2) **Ideas are More Important than Object:** According to Idealists, knowledge of mind and soul can be obtained through ideas only. Hence, they have given more importance to ideas over the objects and material or later. In the words of **Plato** "Ideas are of the ultimate cosmic significance. They are rather the essences or archetypes which give form to cosmos. These ideas are eternal and unchanging."

3) **Importance of Man over Nature:** To Idealists, man is more important than material nature. It is because man can think and experience about material objects and material phenomena. Hence, the thinker or the one who experiences is more important than the object or the phenomena experienced.

Man is endowed with intelligence and a sense of discrimination. Thus, he is not a slave of the environment as animals are but the moulds and transforms the environment for his own good and welfare of the society. In short, he creates his own world of virtue and his creativity achieves higher and higher levels of art in many areas.

4) **Faith in Spiritual Values:** According to Idealists, prime aim of life is to achieve spiritual values such as, **truth, beauty** and **goodness.** These spiritual values are undying and permanent. The realisation of these values is the realisation of God. In the pursuit of these absolute values man rises higher and higher in the moral plane till he attains divinity. For the achievement of these spiritual values all the capacities of man are to be harnessed to the full. These capacities are - knowing, feeling and willing.

5) **Importance of Personality Development:** Idealists give much importance to the 'self' of the individual. Hence they insist upon the fullest development of the personality of an individual. According to them, the development of personality means achievement of 'perfection'. **Plato** rightly speaks that each individual has an ideal 'self'. He tries to develop that ideal 'self' more and more. This self-realisation is the true sense of the term. It may be noted that self-realisation means knowledge of the 'self' or soul. This self-realisation can only be achieved in society. Hence, development of social qualities is very essential for self-realisation as it expresses itself in the form of love, sympathy, fellow-feeling and cooperation for the good of all and discrimination among human beings on any basis of caste, creed, sex, race or status, etc. It clears the fact that Idealism advocates the concept of universal education. In short Idealism believes in the welfare of whole human community.

6) **Full Support to the Principle of 'Unity in Diversity':** Idealists give full support to the principle of Unity in Diversity. They believe that is of spiritual nature. This may be called Universal Consciousness or Divinity. This underlying divine force maintains the existence and working of all entities. Idealists call this power as God, the supreme force of which is omnipotent and omnipresent.

2.7.4. Forms of Idealism

Idealistic philosophy can take any of the following form:

1) **Personalistic Idealism: Berkley** only accepts the actuality of mind. The qualities and attributes are mental in nature. Individuals convert these attributes into materials hence this conversion is individualistic (personal) in nature.

2) **Absolute Idealism:** In absolute idealism, **Hegel** and **Fitche** are the proponents of the idealism philosophy. This idealism is based on the fact that only the soul is the real truth. Since every process in this world is regulated by some laws of nature, hence, only these laws are the reality. The progress in the physical environment is the result of thesis, antithesis and synthesis. This progress continues until the absolute truth of the life is attained by the individual.

3) **Objective Idealism: Plato** is regarded as one of the earliest representatives of objective idealism. According to this, all of reality is based on the

perception of a single mind, usually, but not always, identified with God, which then communicates its perception to the minds of everyone else. There is no time, space, or other reality outside of the perception of this one mind; indeed, even we humans are not truly separate from it. We are more akin to cells that are part of a larger organism rather than independent beings.

4) **Phenomenal Idealism: Kant** is the exponent of the phenomenal idealism. According to him, the knowledge that we have acquired about physical or metaphysical world is not actually and absolutely real. It is only the phenomenon of reality. Original or absolute reality cannot be known, as it is beyond our capacities. **For example,** God, heaven or hell actually cannot be known by anybody.

5) **Modern Idealism:** The modern idealism also known as the 'philosophy of idealism', has given a different perspective to the existing idealism. The 'I' of the idealism represents 'euphony'. The knowledge that the individual possesses is only the basic idea of the existing environment. The truth of the environment cannot be ascertained, neither by its intermediary idea nor by knowing directly but can be known only through the intermediary idea of human knower. These concepts can only emerge in the human minds.

2.7.5. Idealism in Education

Idealism pervades all the creation and it is an underlying, unlimited and ultimate force which regions supreme overall mind and matter. They all advocate its greater importance in education and lay more emphasis on aims and principles of education than on models, aids and devices. In idealism, the education is provided:

1) To discover and develop each individual's abilities and full moral excellence in order to better serve society,
2) The curricular emphasis is subject matter of mind – literature, history, philosophy, and religion,
3) Teaching methods focus on handling ideas through lecture, discussion, and Socratic dialogue (a method of teaching that uses questioning to help students discover and clarify knowledge),
4) Introspection, intuition, insight, and whole-part logic are used to bring to consciousness the forms or concepts which are latent in the mind, and
5) Character is developed through imitating examples and heroes.

2.7.5.1. Aims of Education

Aristotle said that education is essential for complete self-realisation as he says, "The supreme good to which we all aspire is the happiness. A happy man is the one who is educated. A happy man is virtuous, virtue is gained through education."

Plato said that the Education is for the individual's personal betterment and that of the society. The following are the aims of education according to the philosophy of idealism:

1) **Universal Education:** Education according to idealism should be universal in nature. The universe is regarded as a thought process. Education should be based on the teaching of universal truth from the stand-point of rationality of the Universe.

2) **Self-realisation or Exhalation of Personality:** According to the idealism man is the most important creation of the God. Self-realisation involves full knowledge of the self and it is the first aim of education. The aim of education especially associated with idealism is the exhalation of personality or self-realisation it is the making on actual or real personalities of the self.

3) **To Ensure Spiritual Development:** Idealistic give greater importance to spiritual values in comparison with material attainments. The second aim of education is to develop the child mentally, morally and above all spiritually. Education must enable mankind through its culture to enter more and more fully into the spiritual realm.

4) **Development of Intelligences and Rationality:** In all things their regions and external law is all pervading energetic, self-conscious and eternal law is all-pervading energetic. This unity is God. Education should lead and guide man to face with nature and to unity and God.

5) **Transmission and Promotion of Cultural Heritage:** The aim of idealistic education is the preservation; enrichment and transmission of culture, education must contribute to the development of culture. It should help in enlarging the boundaries of spiritual realm.

6) **Cultivation of Moral Values:** According to idealism, man is essentially a moral being. Therefore, moral, intellectual and aesthetic aspects of his personality should be promoted.

7) **Preparation for Holy Life:** Idealism prepares an individual for a holy life. **Froebel** said that the object of education is the realisation of a faithful, pure, inviolable and hence holy life.

8) **Cultivation of Truth Beauty and Goodness:** The aim of idealistic education is to cultivate spiritual values in the individuals. The pursuit of the highest ideals, i.e., truth, beauty and goodness should be encouraged more and more in the child so that he achieves self-realisation. These three values determine three types of human activities – intellectual, aesthetic and moral.

2.7.5.2. Stages of Education

Plato has also divided the process of education under following major steps:

1) **From Age 7 to 18:** Study general mathematic, music, astronomy and so on.
2) **From Age 18 to 20:** Considers best for physical training.
3) **From Age 20 to 30:** Study of logic, knighthood, and mathematics.
4) **From Age 30 to 35:** Study of dialectics.
5) **From Age 35 to 50:** Practice of dialectics in various official affairs in the state.
6) **From 50 years and Above:** A person can become a philosopher or king as his turn comes.

Plato says that in each step the person is given with different sort of education. He suggests screening those in each step who cannot perform well. The ones who can successfully pursue all the six stages can be called philosophers who have the understanding of the form of good.

2.7.6. Impact of Idealism on Education

Idealism has greater impact on different aspects of education, viz., curriculum, teacher, school, student, etc.

2.7.6.1. Idealism and Curriculum

Idealists give more importance to thoughts, feelings, ideals and values than to the child and his activities. They firmly hold that curriculum should be concerned with the whole humanity and its experience. **According to idealism**, the teacher is the symbol or model of good character; he is the masters of all sort of knowledge, so the teacher has the central role in the teaching-learning. The teacher has right to choose suitable content from the available literature and to teach. The student is a passive receptor, who has to gain the knowledge transferred by the knowledge. The teacher certifies the disciple at the successful completion of education as per the above given age levels:

1) **Views of Plato about Curriculum: According to Plato**, the aim of life is to realise God. Which is possible only by pursing high ideals – **Truth, Beauty,** and **Goodness**. Three types of activities, namely, intellectual, aesthetic and moral can attain these high ideals.

2) **Views of Herbart about Curriculum: According to Herbart,** the idealistic aim of education is the promotion of moral values. He gave prime importance to subjects like Literature, History, Art, Music, and Poetry together with other humanities and secondary place to scientific subjects.

2.7.6.2. Idealism and Methods of Teaching

Idealism is traditional philosophy of education in which teacher has central role who has to be role model so that the students will adopt his model to become good citizen. Idealism and methods of teaching are as follows:

1) **Lecture Method:** In idealism, the **lecture method** is considered the most important one in which teacher delivers lecture and students listen to the teacher. Teacher selects any topic or issue for teaching, first he teaches the topic then asks the questions about that topic. Students answer the asked questions, teacher provides the feedback and students improve themselves according to the teacher's feedback. This is teacher-centred approach therefore students do not participate in a well manner and do not understand the taught content. This method of teaching is not suitable for young or elementary level of students because they are not habitual for listening long time. This method is only used for adults. Because their mind is mature and they can understand easily.

2) **Socratic Method:** The second method that suits idealism the most is the Socratic Method in which the teacher involves the students in learning activities. The teacher raises an issue and the students are encouraged to discuss it in a dialogue form and reach to a conclusion.

The following methods have been advocated by different idealists:

1) Learning through reading,
2) Learning through lecturing,
3) Learning through discussion,
4) Learning through imitation, and
5) **Descartes** employed the device of simple to complex.

2.7.6.3. Idealism and Teacher

Idealism assigns a special role to the teacher. It considers teacher as a spiritual guide for the child. The teacher serves as a living model for the student. He sets the environment in which education takes place. He carries the child from darkness to light. He is to guide the student towards utmost possible perfection. In reality an Idealist teacher is imbued fully with high degree of self-knowledge, self-dynamism and essential qualities of spiritualism. By this own model of life, he tries to shape the individuality of the child to a life of purity, virtue and great achievements. He creates a wholesome conducive atmosphere by his own activities and planned experiences for the child.

2.7.6.4. Idealism and Student

For an idealistic philosophy, the ideas and thoughts hold the prime importance while the student in the process of education is secondary. There is a belief in idealists that the student has to develop an unlimited soul from a limited one, by adopting regular instructions so that the student achieves eternal powers. **According to B.B. Bogoslovasky**, "The student is a finite person growing when properly educated into the image of an infinite person." Idealists suggest that the student should be under the guidance of teachers and should obey and learn from their qualities. The student should possess the abilities to pay respect, honour, dedication, and liking of meditation, utmost loyalty and wisdom, sharpness of speech towards their teachers. The relationship between the teacher and their taught should be pleasant and cordial.

2.7.6.5. Idealism and Discipline

Idealists want that the student should be under discipline. Punishment will be given if the student does a wrong act and no rewards will be given for the right activities as it is the prime responsibility of the development of spirit. Idealists also believe that there will be no development of spirit in the students if discipline is not acquainted. The vital factors of discipline include self-regulation and self-analysis. Self-discipline in the student can be developed by the behaviour and qualities of the teacher. The idealists also explain that there should be proper control and regulation over the inappropriate activities of the student. Regulated freedom and liberty should also be provided to the students for their spiritual development.

2.7.6.6. Idealism and School

A school is considered as the place where the students develop their mental abilities and values through proper guidance and regulation of the teachers in order to achieve high spiritual principles and knowledge. Idealism suggests that the disciplinary environment of the school and proper guidance of the teachers should essentially be present for the overall spiritual development of the students.

2.7.6.7. Idealism and Assessment

In idealism Assessment is a means for focusing teachers' collective attention, examining their assumptions, and creating a shared culture dedicated to continuously improving the quality of higher learning. Assessment requires

making expectations and standards for quality explicit and public; systematically gathering evidence on how well performance matches those expectations and standards; analysing and interpreting the evidence; and using the resulting information to document, explain, and improve performance. In idealism, teacher has the central role then the child, so he can assess the child's learning by asking him certain questions based on the information that has been provided by teacher's lecture or from the text book used in the teaching learning process.

2.7.7. Merits of Idealism

Idealism can be understood on the ground of following merits:

1) Idealism is the most ancient and comprehensive philosophy and its contributions to educational thoughts are solid and profound.
2) Idealism has given a higher place to mental and spiritual qualities than to the physical world so that men can lead a peaceful and contented life. Thus, the aim of education is the perfection of the individual.
3) Idealism leads to the spiritual insight and to the highest moral and spiritual conduct.
4) Idealism lays stress on self-realisation, which is essential to acquire knowledge relating to the spiritual world.
5) It guides us to a simple living and high thinking.
6) Idealistic philosophy prepares us for both heavenly life and life in the earth.
7) Idealism provides a significant place to the teacher and places him next to God in the educational process.
8) Idealism contains the highest knowledge that of self or divine cosmic or spiritual life that leads to the freedom of mind.
9) Idealism gives importance to the development of human personality which results in a fresh look at human relations in teaching.
10) It makes the educational institutions, places for learning and creating values like truth, beauty and goodness which will lead to the development of the moral character of the child.
11) Idealism determines the path of many educational philosophers. It has been supported by great philosophers of the world who have put it into educational practices.
12) Idealistic philosophy emphasises religious studies in order to foster character development in the child.
13) Idealism warns against the views of treating the human being as a machine.
14) Idealism holds that every man must receive a chance to be educated. It emphasises universalisation of education to form a better society.
15) Idealistic philosophy provides clear and direct guidelines to determine the aims of education, curriculum, role of teacher, etc.

2.7.8. Demerits of Idealism

There are certain demerits of idealism too, which are as follows:

1) The aims of idealistic education are abstract, a figment of imagination and impracticable, and are difficult to achieve in this functional world.

2) Idealism neglects the psychological nature of the child and is inclined towards spiritualism.
3) Idealism ignores material world and stresses on the spiritual world. This philosophy becomes imaginary and does not work in the modern scientific world.
4) Idealism philosophy assigns too much importance to teachers and places them next to God. It asserts that the teacher gives the child second birth. It treats the child as slave.
5) Idealism leads to a rigid and often totalitarian social order. The child is kept under strict discipline.
6) Idealists follow different methods of teaching according to their own interests. They fail to have a significant method of teaching.
7) Idealists regard the highest values such as truth, beauty and goodness as permanent and immortal. But in reality, they are not absolute and may change with time and environment.
8) Idealism pays less attention to physical, industrial, social and electronic environment, which are essential for achieving socio-economic developments.
9) Idealists do not take note of the individual differences and special abilities of pupils.
10) Idealistic philosophy emphasises humanities and neglects the study of science and technology which occupy a very significant role in modern education.

2.8. NATURALISM

2.8.1. Meaning and Definition of Naturalism

In philosophy, naturalism is considered as the "idea or belief that only natural laws (as opposed to supernatural or spiritual) and forces operate in the world". Naturalists assert that natural laws are the rules that govern the structure and behaviour of the natural universe, i.e., the changing universe at every stage is a product of these laws. Naturalism can intuitively be separated into an ontological and a methodological component. Naturalism is a philosophical view, but one according to which philosophy is not a distinct mode of inquiry with its own problems and its own special body of (possible) knowledge.

Naturalism is usually defined most briefly as the philosophical concept that the only reality is nature, as gradually discovered by our intelligence using the tools of experience, reason and science.

According to Naturalism, "Man's conscience is the voice of reason and the voice of nature."

According to Brais, "Naturalism is a system where salient feature is the exclusion of whatever is spiritual."

According to R. B. Perry, "Naturalism is not science but an assertion about science. More specifically it is the assertion that scientific knowledge is final, leaving no room for extra scientific or Philosophy knowledge."

According to Thomas and Lang, "Idealism is considered as opposite to naturalism which inclined to materialism and believes that ultimate fact is material and not religion."

According to many naturalists, philosophy is a certain sort of reflective attention to the sciences and it is continuous with them. They maintain that this is so not only in the sense that philosophy's problems are motivated by the sciences, but also in that its methods are not fundamentally distinct.

Naturalism is viewed as:

1) **Romantic Naturalism:** These reforms rejected traditional conception of a child as a miniature adult. They protested the practice of coercive authoritarian methods. They embraced the notion of the child as a flower to unfold naturally. They emphasise that the school must be an environment in which the child's spontaneity, felt needs and activity are effective in learning.

2) **Science and Sentiment:** Child study movement in education begans as an effort to induce educational reform through the scientific study of the child, but it was dominated by sentiment. Their belief in centrality of child life in the curriculum led them to regard child's interests and spontaneous activity indulgently as achievement, rather than as means towards intellective and social growth. But, **Dewey** admonished romantic progressivists for their failure.

3) **Humanistic Curriculum:** During 1960s as a reaction against subject-dominated cognitive learning, humanistic thinking was promoted. This can be seen from **Charles Silber Man's** best-selling book **'Crisis in the Classroom'** where emphasis was laid on humanising American schools. It was complained that schools are training children with docility and conformity. He suggested the British infant school system at the elementary level and independent study, peer tutoring and community and work experiences at the secondary level. He believes the schools should be reformed.

2.8.2. Characteristics of Naturalism

In the field of education, Naturalism means the development of child according to his inherent nature. Physical nature is external and nature of the child is internal which means the basic instincts, impulses, tendencies, capacities and other in born potentialities of the child. According to Naturalism, the external laws of nature should correspond and cooperate with the internal nature of the child for his full natural development. Characteristics of Naturalistic education are:

1) **Back to Nature:** Out of three essential factors of education namely nature, man, and objects, naturalism gives prime importance to nature. Hence, its call is 'Back of Nature'. According to naturalists, the best teacher of the child is nature. Hence to develop the child according to his nature, education should provide natural environment.

2) **Education as Natural Necessity:** The naturalist regards education as a natural necessity. For them, educational institutions are unwanted creation of men superimposed upon nature.

3) **Development of Natural Life:** According to Naturalistic thought, education is a process of development of the natural life. As **Monroe** perceives it, "Education is the process of developed into an enjoyable, rational harmoniously balanced, useful and hence natural life."

4) **Freedom of Child:** It gives prominent place to the concept of freedom in the education of the child.

5) **Child-Centred Educational Process:** Child occupies the central and pivotal role in the naturalism set-up. The child's nature is in the forefront where all other things such as education, the books, the curriculum, the school, are in background.

6) **Opposition to Bookish Knowledge:** Naturalistic education is its opposition to mere academic knowledge and verbalism of books. The prevalent education meant mere cramming of Greek and Latin literature. Naturalists opposed this education calling it artificiality, snobbery and mere show. They emphasised real education to be according to the nature of the child through natural interests and activities. **Rousseau** was such a staunch supporter of education by nature. For him all education, even the early childhood should be self-learning or learning by doing.

7) **Freedom of the Child:** Naturalistic education is to allow full freedom to the child to develop himself according to his natural tendencies. The school, the time-table, the books and the teacher should not condition his experiences in any way as per-planning or preconditioning spoils his natural growth and stunts his normal development. The child should be put under no restraints, no interferences, no difficulties and no confusions. He should be completely free to structure his own plans, activities, observations and experiences. **Rousseau** emphatically exhorts, "God makes all things good. Man meddles with them and they become evil."

8) **Emphasis on the Training of Senses:** Naturalistic education emphasizes the training of senses. Nothing is acquired by force from outside. Our senses are the gateways of knowledge. These senses need training to discharge their function with efficiency. In this connection **Rousseau** has well said, "Education should prepare the way for reason by the proper exercise of senses."

2.8.3. Principles of Naturalism

Naturalism has the following principles:

1) The universe is a huge machine. Man is also a part of this machine and a complete machine in him also.
2) Life comes out of dead matter and is a sum total of physical and chemical reactions.
3) All the capacities of an individual human being are delimited by his nature. Those are his innate and inherent tendencies and basic instincts.
4) Man, because of his own nature, is the supreme creation of Nature.
5) The present life is the real life. Except this world, there is no other world beyond it. Hence, man should try to make this life happy and comfortable.

6) Reality is of the external natural only. All objects are born or made out by this Nature and ultimately disappear in Nature. Laws of external Nature never change.
7) Unchanging laws of Nature explain all the events and occurrences of the world.
8) The changes in the life of man and his physical conditions are due to scientific discoveries and inventions of machines and mechanical devices which promote all sorts of comforts. Hence, knowledge of physical inventions and discoveries is very essential.
9) The true explanation of reality can only be done in terms of physical sciences.
10) The ultimate reality is of matter. God, Soul, Mind, The Heaven and Hell, Freedom of Will, Moral Values, Prayers and Superhuman Wonders are all illusions.
11) Thoughts depend on physical circumstances. They are activated only when some external stimuli affect the body organ of an individual.

2.8.4. Forms of Naturalism

There are three forms of Naturalism:

1) **Physical Naturalism:** This form of naturalism concentrates its hold on external nature. The laws of physical nature govern the laws of human life. The fundamental of these laws is that the natural is good and civilized evil.
2) **Mechanical Naturalism:** Mechanical Naturalism regards man as a machine. Mind is well as man is matter. He is mere machine devoid of spiritual soul. This machine is run by time guiding principles and these principles are natural.
3) **Biological Naturalism:** Biological Naturalism emphasises the development of man's natural impulses, natural propensities and inborn tendencies. It has put forward the following principles of evolution:
   i) Adaptation of environment,
   ii) Struggle for existence,
   iii) Survival of the fittest.

2.8.5. Naturalism in Education

Naturalism in education stands for the doctrine of **"follow nature"** in education. Naturalism as a philosophy of education has exercised a great influence on the theory and practice of education. "It decries all external restraint in education and it condemns all unnecessary formalities in education."

In the naturalistic system of education there is no place for classroom, textbooks, time-table, formal lessons, curricula or examination. The 'chalk and talk' method has no scope. The teacher has no significant role to play. External discipline has no place in naturalistic system of education. The only discipline applied in this system is the discipline of natural consequences. Naturalism has no faith in formal education. To the naturalists, formal education is artificial and vicious. Good education can be had only by a direct contact with nature. Naturalism in education has great influence on different aspects such as aims of education, curriculum, teacher, etc.

2.8.5.1. Aims of Education

Complete living is the general aim of education. As this is not very explicit term, it may be made more understandable by a parallel attempt at generalisation. This impression is borne out by the specific aims which are now to be discussed:

1) **Self-Preservation:** Self-preservation is the first aim of education. In order to live completely, as man has first of all to live, he has to continue his own existence. While instinct is the chief guarantee of this aim, education may also help by acquainting the learner with the laws of health and enabling him to earn a living.

2) **Securing the Necessities of Life:** It is especially in the realm of developing economic efficiency that education helps in preserving life. Money is not life, but it is a necessity in maintaining life. Education should train directly for success in this important function.

3) **Raising Children:** Though a bachelor, **Spencer** held that the most important function that most men and women have to perform is that of being parents. Therefore education should deal unashamedly both with the care of children in the nursery and the discipline of them as growing boys and girls.

4) **Maintenance of Social and Political Relations:** Beyond the home in the far-reaching social structure, man must have some understanding and mastery of social and political processes if living is to be complete. He must be a wise citizen who is equipped for effective social and political action.

5) **Enjoyment of Leisure:** Life is not all serious struggles, keeping physically strong, earning a living, being a responsible parent and an earnest citizen. Complete living also includes freedom from struggle some of the time for **"gratification of the tastes and feelings."**

Naturalism gives different ideas about the aims of education:

1) In the opinion of **Rousseau**, education aimed at the inner faculties, capacities and powers of the child. **According to Rousseau,** aim of education is not preparation for life, but participation in it.
2) Each stage through which a child passes has a specific aim of education and these aims differ according to the stage.
3) The aim of education during the first stage of a child is to gain knowledge and all the wants and needs of a child are to be fulfilled.
4) The aim of education is to provide the child with the strength that the child lacks of the ability of being free.
5) At the third stage the aim of education is to enable the child to acquire useful knowledge which would satisfy the child's wants.
6) The aim of education is to develop the child emotionally and morally according to the child's needs.

2.8.5.2. Stages of Education

According to Rousseau, there are four stages of education:

1) **Infancy:** When the child is at this stage, the child is not mature. Infants' psychology is totally different from the adults. At this stage the child can be taught through normal conversation.

2) **Childhood:** Rousseau believed that child should not be given books up till the age of twelve. The child must learn through experience. The child learns naturally through his own actions and starts developing the ability of reasoning.

3) **Adolescence:** At this stage the child can be taught formal education. The child is exposed to various subjects such as physical sciences, language, mathematics, social studies and music and drawing and some kind of professional training. **According to Rousseau,** education should be given through activities and not by books because activities give more knowledge than books.

4) **Youth:** At this stage special emphasis is laid on moral and religious education. Moral education can also be derived through actual experience. Religious education can be taught through the teachings of history, mythological stories and religious stories.

2.8.6. Impact of Naturalism on Education

The following points state that the naturalism has greater impact on education:

2.8.6.1. Naturalism and the Curriculum

According to naturalists, curriculum must be child-centred considering the present and future needs of the child. Naturalists have divided curriculum under two stages:

1) **Earlier Stage:** In the early stage sensory training is given to the child. The child senses are properly exercised; the child develops physically and also develops the natural habits.

2) **Later Stage:** At the later stage the naturalists included in the curriculum subjects as physical sciences, language, mathematics, social studies, anatomy and other subjects. Manual work, trade, history aesthetics, physical culture, music and drawing are also included in the curriculum. Moral education also being part of the curriculum is given through activities and occupations but not through lectures on ethics.

There are divergent views of naturalists on curriculum. These are:

i) **No Rigid Curriculum:** Naturalism does not advocate any rigid or fixed type of curriculum. Child learns best in a natural setting and nature is a grand book. Naturalistic curriculum is based upon the psychology of child and gives maximum importance to the age and stage of his development.

ii) **Sciences:** Idealists lay emphasis on the study of humanities but naturalists believe in science subjects like physics, chemistry, zoology and botany. They also give due importance to mathematics and languages.

iii) **Focal Point:** The focal point in the curriculum construction is that the textbooks and teaching should be oriented towards science and scientific point of view with simplicity and objectivity and with knowledge of relevant facts as the controlling aim.

2.8.6.2. Naturalism and Methods of Teaching

Naturalists follow a naturalistic philosophy of teaching. According to naturalists people learn more through **direct experience** that is by doing rather than by reading the books. **Rousseau** argued not to use any book in the childhood and adulthood stage. Another method is **Heuristic method** which means to find or to discover, the children are provided with situation and opportunities and the children search. Naturalists stress upon direct method of teaching. Teaching through things rather than words is given importance. **Rousseau** emphasised two-way play method of teaching, learning by doing; during play also child learns a lot and is educated.

2.8.6.3. Naturalism and the Teacher

Naturalists do not like that, children should be taught in classes by teachers who are spoiled by the artificial atmosphere. Teacher, in whose close contact of the child develops normally and naturally.

Rousseau thought that child's natural development takes place only when he is allowed to develop freely without any hindrance or interference from outside. Naturalists do not like that children should be taught in classes by teachers. To them, Nature is the only supreme teacher, in whose close contact the child develops normally and naturally.

2.8.6.4. Naturalism and Student

Naturalists consider the child as the 'hero' in the drama of education. They state that education is for the child rather than the child for the education. They emphasise the fact that a child should be treated as a child and not as an adult. At the time of birth, the child is fully free from evils. But later the society and the environment spoil and corrupt him. So, the child should be kept away from the ills of society. Student should be provided education in a free and natural environment. The child gets precedence over the teacher in this ideology.

2.8.6.5. Naturalism and Discipline

In the field of discipline also, Naturalists depend upon nature and advocate the theory of "discipline by Natural consequences". Nature will punish the child if he contravenes the law of nature and thus he will learn by the consequences of his own action. Thus, nobody should interfere in this process of nature. The child should be allowed full freedom to indulge in the activities of his choice. The teacher should provide such experiences for free activity.

2.8.6.6. Naturalism and School

The organisation of school is rigid, controlled and artificial and as such the growth and development of children is stunted and spoiled. Thus they assert that school environment should be completely free, flexible and without any rigidity.

There should not be any fixed time-table and no forcing from above the readymade doses of knowledge into the minds of children. Nature will do all the

planning and processing for the natural development of children. Nature itself structures all the free and desired experiences and also develops the feeling of self-learning and self-discipline.

The **Summer Hill School** of Neel and Tagore's **Vishwa Bharti** are models of such free schools where children are given full freedom to plan their own thinking and activities according to their own interests and natural tendencies.

2.8.7. Merits of Naturalism

There are many merits of naturalism in the field of education and provides many valuable conclusions:

1) The merits of naturalism are that it is a child centered process of education.
2) It emphasises on the natural interests and capacities of the children.
3) It focuses on the learning from experience of the children, so that the child is educated to solve all the problems of the life successfully.
4) Naturalism brings a variety in teaching methods which are effective.

2.8.8. Demerits of Naturalism

The demerits of naturalism are that:

1) It emphasises too much on nature and natural development.
2) The aims of education of naturalism are one-sided and unsatisfying.
3) So much emphasis is given on present needs which will avoid the preparation of the people for the future. Books are given no emphasis which is not good because books play a great role in the development of the personality.

2.9. PRAGMATISM

2.9.1. Meaning and Definition of Pragmatism

Pragmatism in Education was created by **John Dewey**. He applied pragmatism philosophy in his progressive approaches. He believed that learners must adapt to each other and to their environment. Schools should emphasise the subject matter of social experience. All learning is dependent on the context of place, time, and circumstance. Different cultural and ethnic groups learn to work cooperatively and contribute to a democratic society. The ultimate purpose is the creation of a new social order. Character development is based on making group decisions in light of consequences.

According to James B. Prett, "Pragmatism offers us a theory of meaning, a theory of truth of knowledge and a theory of reality."

According to Reid, "Pragmatism makes activity, engagement, commitment and encounters its central theme."

According to Williams James, "Pragmatism is a temper of mind, an attitude, it is also a theory of the nature of ideas and truth, and finally it is a theory about reality."

According to J.S.Ross, "Pragmatism is essentially a humanistic philosophy, maintaining that man creates his own values in the course of activity that reality is still in the making and awaits its part of completion from the future, that to an unascertainable extend our truth are man-made products."

Pragmatists believed that only those things which are experienced or observed are real. In 19th century American philosophy focuses on the reality of experience. Unlike the realists and rationalists, pragmatists believe that reality is constantly changing and that we learn best through applying our experiences and thoughts to problems, as they arise. The universe is dynamic and evolving, a "becoming" view of the world. There is no absolute and unchanging truth, but rather, truth is what works.

2.9.2. Characteristics of Pragmatism

Characteristics of pragmatic education are:

1) **Education as life:** Traditional education is dead and lifeless. The students are passive recipients without any dynamism and push. Real knowledge can be gained by activity experiments and real life experiences.

2) **Education as Growth:** Society is undergoing a process of continual change. Education should correspond its activities to suit the changes in society. Education should develop the inherent capacities of the child according to his interests, inclinations and aptitudes, so that he can create his own values to face the problem.

3) **Education as Continuous Reconstruction of Experiences:** Bookish knowledge is condemned. Real knowledge is gained by experiments and experiences. They transform the behaviour and personality of the child.

4) **Education as Social Process:** Education should develop desirable qualities that he is a sociable person. An individual gains more knowledge from his interaction with his friends, family and society rather than the books.

5) **Education as Responsibility of State:** Education is the birth right of the child. The state should shoulder the responsibility of the education of the child otherwise the whole nation will suffer and lag behind.

2.9.3. Principles of Pragmatism

Following are the principles of pragmatism:

1) **Truth is Ever Changing:** Truth always changes according to time, place and situation. A certain thing which was true to a person yesterday need not be the same for him today or will remain the same tomorrow.

2) **Truth is formed by its Result:** Truth is not fixed and definite entity. The change in situations bring new problems to be solved by new thoughts and new efforts. Truth is not absolute or predetermined for all times to come.

3) **Problems are Motives of Truth:** Human life is a laboratory where each individual undertakes various experiments to solve problems he confronts, in his growth and development. The success of the experiment is a search for truth.

4) **Man is a Social Being:** Man is born in society and all his development takes place in society. Pragmatists uphold social and democratic attitudes and values.

5) **Opposition to Fixed Ideals and Values:** Ideals and values are not pre-determined and fixed. Values and ideals are man-made and they change according to changes in circumstances, times and places. It has an indifferent attitude towards moral and spiritual ideals and values.

6) **Principle of Utility:** Any idea which is useful to us is proper and right. In case, it is of no use it is improper, wrong and untrue.

7) **Importance of Man Power:** Man has the power to create an environment useful, beneficial and conducive for his own development and welfare of society.

8) **Importance of present and future:** Man is an active being. He learns through his activities in his life. Ideas are born out of activities.

9) **Opposition to Social Customs and Traditions:** Old customs, traditions, restrictions and taboos are denied. It believes in the realities of life, human intelligence and mental capacity which results in human welfare and happiness.

10) **Faith in Pluralism:** The ideals and values which are testified by experiences are true and real. It believes in pluralism.

11) **Reality in Making:** The attitude is optimistic, progressive and developing. To call the present world as fully made up, absolutely beautiful and complete is wrong. The world is still in the process of formation and development.

12) **Faith in Flexibility:** The world is changing and everything is under a process of change. Nothing is fixed and final in this world. He employs all his mental faculties, learns from his experience and experiments to the path of progress and development.

2.9.4. Forms of Pragmatism

Forms of pragmatism are:

1) **Humanistic Pragmatism:** This type of pragmatism is particularly found in social science. According to it the satisfaction of human nature is the criterion of utility. In philosophy, in religion and even in science man is the aim of all thinking and everything else is a means to achieve human satisfaction.

2) **Experimental Pragmatism:** Modern science is based upon experimental method. The fact that can be ascertained by experiment is true. No truth is final, truth is known only to the extent it is useful in practice. The pragmatists use this criterion of truth in every field of life. The human problems can be solved only through experiment.

3) **Nominalistic Pragmatism:** When we make any experiment we comes towards result. Our aim is examination of the material. Some hypothesis about the results invariably precedes every experiment. According to nominalistic pragmatism, the results of an experiment are always particular and concrete, never general and abstract.

4) **Biological Pragmatism:** Experimentalism of **John Dewey** is based upon this biological pragmatism according to which the ultimate aim of all knowledge is harmony of the man with the environment. Education develops social skill which facilitates one's life. The school is a miniature society which prepares the child for future life.

2.9.5. Pragmatism in Education

In the present world pragmatism has influenced education tremendously. It is a practical and utilitarian philosophy. It makes activity the basis of all teaching and learning. It is activity around which an educational process revolves.

2.9.5.1. Aims of Education

Chief aims of education according to pragmatism are given below:

1) **Creation of New Values:** Pragmatists have no fixed aims or goals of education. **According to Ross,** "The general educational aim of the pragmatist is just the creation of new values."

2) **Activity and Experience:** For the creation of new values, activity and experience are essential. Education should, therefore, provide physical, intellectual, moral and aesthetic activities as the media for the creation of values.

3) **Personal and Social Adjustment:** But all these aspects are developed not for their own sake, but for meeting the individual and social needs of man. So the main aim of education is "to direct the impulses, interests and abilities towards the satisfaction of the need felt by child in the environment."

4) **Reconstruction of Experience:** Then, as every individual is required to solve many diverse problems in his life, the aim of education should also be the formulation and cultivation of a dynamic adoptable, resourceful and enterprising mind. It is with such a mind that original and creative thinking is possible which will enable a person to cope successfully with the varied situations of life. Pragmatism emphasises adaptation to environment, construction and re-construction of experience and development of capacities to control the environment.

5) **All Round Development:** All round development of the individual is also important aim of education. The individual develops physically, mentally, socially, morally and aesthetically.

2.9.6. Impact of Pragmatism on Education

Educational impact of pragmatisms is discussed under following aspects, such as curriculum, methods of teaching, teacher, etc.

2.9.6.1. Pragmatism and Curriculum

According to Dewey, experience is the content of education. Ideas formed by previous generations are vital for human survival, and it is the task of education to transmit this knowledge to the younger generations. This, however, should not be done as it was being done traditionally. Traditional education never relates ideas and experience, and due to this reason, children cannot understand the

taught lessons. **Dewey** says that ideas should be taught as experience. Children should learn to derive ideas from their experiences.

In the field of curriculum development, the following principles have been prescribed by pragmatists:

1) **Principle of Utility:** According to this principle, only those subjects, activities and experiences should be included in the curriculum which are useful to the present needs of the child and also meet the future expectations of adult life as well. As such language, physical well-being, physical training, Geography, History, Science, Agriculture and Home science for girls should be included in the curriculum.

2) **Principle of Interest:** According to this principle, only those activities and experiences wherein the child takes interest should be included in the curriculum. **According to John Dewey,** these interests are of four varieties - interest in conversation, interest in investigation, interest in construction and interest in creative expression. Keeping these varieties of interests in view, at the primary stage, the curriculum should include reading, writing, counting, art and craft-work, natural science and other practical work of simple nature.

3) **Principle of Experience:** The third principle of pragmatic curriculum is the child's activity, vocation and experience. All these three should be closely integrated. The curriculum should consist of such varieties of learning experiences which promote original thinking and freedom to develop social and purposeful attitudes.

4) **Principle of Integration:** Pragmatic curriculum deals with the integration of subjects and activities. According to pragmatism knowledge is one unit. Pragmatists want to construct flexible, dynamic and integrated curriculum which aids the developing child and the changing society more and more as the needs, demands and situation require.

2.9.6.2. Pragmatism and Methods of Teaching

The whole emphasis of method of teaching in pragmatism is on child, not the book, or the teacher or the subject. The dominant interest of the child is "to do and to make". The method should be flexible and dynamic. It must be adaptable and modifiable to suit the nature of the subject matter and potentiality of the students. The pragmatist's curriculum provides for creative and purposeful activities in the teaching-learning process. Pragmatists regard school 'a miniature of society' where child gets real experiences to act and behave according to his interests, aptitudes and capacities.

Project method is a contribution of pragmatist philosophy in education. **Dewey** advocates problem solving method. Through this method a child learns by his own activities and experiences. The teacher develops a problematic experience for learners. Learners perform an activity, and in the course of that activity, a problem is introduced. And then learners are asked to find solutions to that problem. In the course of solving that problem children learn.

2.9.6.3. Pragmatism and Teacher

According to Dewey, it is the responsibility of teacher to design and select proper educative experiences for the learner. Not only that a teacher has to design the learning experience, but he or she also has to conduct that experience.

2.9.6.4. Pragmatism and Discipline

Dewey in Experience and Education advocated a notion of discipline drawn from the field of sports. Education is activity based, and each activity, like a sport, has its own laws and regulations. This means that discipline of education comes from individual activities and is never imposed from outside. **Dewy** is against externally imposed discipline.

2.9.6.5. Pragmatism and School

School for **Dewey** is a social organisation designed to provide social experience to the learners. School mimics the organisation of society itself. Accordingly, in a school learners gain real experiences of actual life which develops in them a sense of duty towards society. It is not only a centre of education but a centre of community. School is a true representative of a society.

2.9.7. Merits of Pragmatism

Pragmatism has the following merits:

1) **Construction of Project Method:** In the field of methods of teaching, pragmatism has given birth to project method. This method, a child indulging in various creative activities, is able to solve many problems which cater to his natural progress and development.

2) **Importance to Child:** Opposing bookish knowledge and formal education, pragmatism lays great stress upon the development of child's individuality by his own efforts.

3) **Emphasis on Activity:** Pragmatism emphasises upon activity. The principle of learning by doing is the main contribution of pragmatism.

4) **Faith in Applied Life:** Pragmatism emphasises the practical life of child. Pragmatic education prepares the child for future life in a very effective manner.

5) **Social and Democratic Education:** Pragmatism develops in the child love for democratic values and social efficiency which bring harmonious adjustment and development of personality.

6) **Infusion of New Life in Education:** Pragmatism has revolutionised the process of education to a very great extent. This has infused a new life and zest in education.

2.9.8. Demerits of Pragmatism

The philosophy of pragmatism has the following demerits:

1) **Opposition to Eternal Truths:** Pragmatism is opposed to pre-determined truth. According to it, truth changes according to a change in circumstances, times and places and is created by the consequences of our actions and experiences. Pragmatists hold that if the results of an activity are satisfying, then it is true otherwise not.

2) **Opposition of Pre-Determined Ideas and Values:** This emphasises that ideals and values are man-made and change according to changes in circumstances, times and places. But all noble things have entered into this human world by the efforts of those great persons who were inspired by the great ideals namely, truth, beauty and goodness.

3) **No Pre-determined Aims of Education:** There is no pre-determined aim of education. In the absence of definite aims of education, all educational plans and efforts may go astray and achieve nothing.

4) **Negations of Spiritual Values:** Pragmatists deny the existence of spiritual values. Negligence of spiritual value is a great blunder. Without developing spiritual values achieving human welfare, peace and satisfaction is simply to cry for the moon.

5) **Opposition of Intellectuality:** Pragmatists believe that a man's intelligence is subservient to his innate tendencies. This makes him only an animal.

6) **Difficulty in the Construction of Curriculum:** Pragmatism emphasise that all knowledge is to be gained from experiences of life. Selecting a project and construction of curriculum to gain all knowledge from life experiences is very difficult.

7) **Pragmatism is only a Method:** Unlike other philosophical doctrines, pragmatism does not lay down any aims, ideals and values of life to be pursued by human beings. Hence, pragmatism cannot be termed as a philosophy of life.

2.9.9. Comparative Study of Idealism, Pragmatism and Naturalism

The comparative study of the various schools is discussed under following table:

Table 2.3: Comparative Study of Idealism, Pragmatism and Naturalism

Subject	Idealism	Pragmatism	Naturalism
Central Theme	Self and idea	Action	Nature.
Main Promoters	Socrates, Fichte, Pluto, Kant, Hegel, Mahatma Gandhi, Green, and Swami Vivekananda.	Kilpatrick, Charles Pierce, William James, John Dewey and Schiller.	Aristotle, Pestalozzi, Bee Lamark, Darwin, Comte Hobbes and Huxley.
Metaphysics	Reality of mind, soul and thought.	Reality is yet under creation.	The ultimate reality is nature.
Epistemology	Mind stores all knowledge.	When general experience is the basis for knowledge, it is considered true, commendable and genuine.	Senses give birth to knowledge.
Axiology	Belief in spiritual and eternal values.	Belief in value creation and alteration by man.	No belief in values.

Basic Principles	1) They have spiritual outlook. 2) They are God believers. 3) Mind is the core of reality. 4) God is the creator of the universe. 5) Merely the laws of spirituality are universal.	1) They have social outlook. 2) They believe that God helps to fulfil the needs of man, i.e., there is belief in God only to an extent. 3) Human experience is the core of reality. 4) Man is the creator of the universe. 5) None of laws is considered universal.	1) They have mechanical outlook. 2) There is no belief in God. 3) Nature is the core of reality. 4) Nature is the creator of the universe. 5) Only natural laws are considered universal.
Educational Philosophy	1) Spiritualism is the base for education. 2) Spiritual environment is emphasised upon. 3) The education is teacher-centred. 4) The emphasis is laid upon bookish knowledge. 5) The belief is in positive education. 6) Education is considered as the dynamic side of philosophy.	1) Society is the base for education. 2) Social environment is emphasised upon. 3) The education is child-centred. 4) Practical knowledge is emphasised more. 5) The belief is in positive education. 6) They believe that philosophy is evolved from education.	1) Nature is the base for education. 2) Natural environment is emphasised upon. 3) The education is child-centred. 4) They do not promote bookish knowledge. 5) Negative education is practiced. 6) Education is considered as the dynamic side of philosophy.
Educational Objectives	1) Self-realisation 2) To develop willpower. 3) Universal education 4) To develop spirituality. 5) To develop a complete man. 6) To preserve and enrich the culture. 7) To develop character.	1) Social efficiency 2) To develop harmony. 3) To make the present life rich. 4) To maximise growth. 5) To create values. 6) To adjust with present. 7) Its aims are dynamic.	1) Self-expression 2) To develop autonomy. 3) To bring perfection into human lives. 4) To redirect instincts. 5) Struggle for existence. 6) To adjust with the environment. 7) To develop individuality.
Curriculum	1) Ethics is emphasised. 2) Curriculum is teacher-centred.	1) It emphasises on subjects which are practical. 2) Curriculum is child-centred.	1) Science and nature are emphasised. 2) Curriculum is child-centred.

Subjects to be Studied	Religion, Philosophy, Ethics, Music, Humanities, Arts, etc.	Home Science, Science, Agriculture, Maths, Civics, History, Geography, etc.	Science, Hygiene, Technology, Physics, Biology, Chemistry, Maths, etc.
Teaching Methods	1) Method of questioning. 2) Lecture method 3) Discussions and debates 4) Dramatics 5) Story-telling 6) Play-way method	1) Learning by activity. 2) Project method 3) Experimental method 4) Heuristic method 5) Inductive method 6) Deductive method	1) Learning by doing. 2) Play-way method 3) Learning by observation 4) Dalton method 5) Heuristic method 6) Project method
Discipline	1) Freedom given to the child is controlled. 2) Self-discipline	1) The child has restricted kind of freedom. 2) Social discipline	1) Freedom given to the child is unregulated. 2) Natural discipline
Teacher	1) Teacher holds the most important and the apex position. 2) Teacher plays the role of idealist and is an ideal man. 3) The teacher provides spiritual guidance to the students.	1) Teacher holds an important position. He remains active, resourceful and alert. 2) Teacher creates situations of learning for the children. 3) The teacher is a philosopher, friend and guide.	1) Nature is considered the greatest teacher. 2) Teacher acts as an observer. 3) The teacher usually does not come in front. Instead he sets the stage for students.
Child	The child is considered a spiritual human being.	The education is centred on the child.	The education is centred on the child.
School	Students imbibe spirituality at the school.	School represents the society in a small form.	School has to be in continuous or direct contact of nature.

2.10. EXISTENTIALISM

↳ exist is Truth

2.10.1. Meaning of Existentialism

Existentialism is a 20th century philosophy that focuses on the nature of human experience and how we can authentically deal with the freedoms that we have. While most philosophies tend to focus on reasoned universally applicable arguments for the existence of some metaphysical phenomenon or ethics, existentialism differs by examining the subjective experience of the individual. Existentialism, more specifically, is concerned with the individual's search for the meaning of his or her life through free will, choice, and personal responsibility in a world void of an intrinsic meaning of life. Thus, existentialism seems to assert that there is no objective and intrinsic truth to the world and that the individual has the freedom to create his own truths, his own values and meaning of life. There are several different orientations within the existentialist philosophy. **Soren Kierkegaard (1813-1855),** a Danish minister and philosopher, is considered to be the founder of existentialism.

Existentialism is being discussed under following heads:

1) **Concept of Man:** The existentialists maintain that the question "what is man?" Existentialists view man as pure existent who is devoid of any essence whatsoever. He is not bounded by any antecedent human nature but is completely free to determine his own nature. In this sense existentialist philosophers emphasise the principle of indeterminism as opposed to various deterministic theories of nature and human behaviour. If man has an essence it is literally his freedom from essence and his consequent freedom to choose and become what he wills. To be a man is to be undetermined, to be free. Man can choose which way he will take and this freedom to choose distinguishes him from all other phenomena in the universe.

   Kierkegaard viewed man not as a species but as an existing individual. Every man, **according to Kierkegaard,** must be assumed in essential possession of what essentially belongs to being a man. He says "man is spirit". But what is spirit? Spirit is the self. But what is the self? The self is a relation which relates itself to its own self or it is that in the relation (which account for it) that the relation relates itself to its own self'. Man is a free entity having freedom of choice. He even makes choices when he chooses not to make any choice. Man can become whatever he wants to become through his choices, but at the same time he cannot avoid the consequences of his choices.

   For **Heidegger**, on the one hand man is creator of his own experience and on the other hand, he is subject of his experience. If man accepts the responsibility for developing his own being then he has true human aspects in his personality.

   According to **Sartre**, man is nothing else but what he makes of himself, i.e., man's destiny is within himself and everyone must find his own way out. Man is free to choose but is responsible of his choice as well.

   According to **Marcel**, man is a combination of subject and object and as long as man is alive his subjectivity cannot be eliminated. Thus the question about man's existence is a mystery.

   To conclude, man according to existentialism is uninterpretable. The essence of man is his existence; his nature or essence can be found only in his concrete, lived experience. Existentialists see man as the determiner of his own values.

2) **Concept of Existence:** Existentialists consider existence as the supreme object of inquiry. According to existentialism, existence is the state of being actual or occurring within space and time or as 'something given here and now'. Existence is conceived as absolutely realistic; it never is but freely creates itself, it becomes; it is a projection; with each moment it is either more or less than it is. For existentialists the verb 'to exist' has a more positive and rich content than the verb 'to live' has. Existence for them means a full, vital, self-conscious, responsible and growing life. Existentialists distinguish between two forms of existence – authentic existence and inauthentic existence. **Authentic existence** is that which is according to the

will of man and inauthentic existence is that which is imposed. Existentialists hold that every man can live either an **inauthentic** existence by being a member of a collective absorbed only in things and details of everyday life or he can live an authentic existence based on his choice.

Existentialism has focused on several aspects of existence:

i) It has focused on the problematic character of the human situation, through which man is continually confronted with diverse possibilities or alternatives, among which he may choose and on the basis of which he can project his life.

ii) It has focused on the fact that all his possibilities are dependent upon his relationships with things and with other men, the dread of death or of the failure of his projects, the guilt inherent in the limitation of choices and in the responsibilities that derive from making them, the boredom from the repetition of situations, the absurdity of man's hanging between the infinity of his aspirations and the finitude of his possibilities.

iii) It has focused on the intersubjectivity that is inherent in existence and is understood either as a personal relationship between two individuals, e.g., I and You, such that the 'You' may be another man or God, or as an impersonal relationship between the unidentified mass and the individual self-deprived of any authentic communication with others.

iv) It permits the liberation of human existence from the degradation to which man is subject in daily life and directs human existence toward its authenticity; towards a relationship that is well grounded on itself, and with other men, with the world and with the God.

3) **Concept of Universe:** According to existentialism, universe is without meaning, and it is absurd. The existentialist individual battles to create meaning in this God abandoned, absurd universe. There is no independently existing order or structure on which one could rely for ultimate purposes or guidance. The different purposes that mankind detect are the projection of their own desire for order. "We may know the particulars of the world, but the world considered as a whole is an idea within ourselves". In reality, the universe that surrounds man is an alien world for him. The universe is a threat that is unknown. Man has to die within this world sooner or later. This universe is unfriendly and cruel. For the existentialist, the real world is the world of existing. According to **Sartre**, the world is the domicile of an idiot, it is a heap of elements which are based upon material, physical and chemical relations all bury making nothing. Man is the only element in this hollow, vain and aimless place that attained self-consciousness. This is the beginning of man's confusion since he lives in a world with which he has no affinity, relationship or compatibility. The world is going nowhere, has no goal, no feeling and man is alienated from it.

4) **Concept of God:** As far as concept of God is concerned, existentialism is divided into two categories, i.e., theistic existentialism and atheistic existentialism. **Theistic Existentialism** affirms a belief in the existence of God and **atheistic existentialism** denies this belief. **Kierkegaard, Jaspers** and **Marcel** represent theistic existentialism, while **Friederich Nietzsche** and **Jean-Paul Sartre** represent atheistic existentialism.

Sartre did not believe in God. "Atheistic existentialism, to which Sartre is one of the most important subscribers, declares that God does not exist". He held that the very notion of God is self-contradictory. He devalued religious beliefs and theological dogmas to an indeterminate state of pure mythology. "For Sartre that God does not exist is a dreadful fact that makes an ultimate difference to the world and to the man". According to **Sartre**, God as the creator of being is not possible because such a creator cannot come out of his subjectivity to create anything independent of himself.

2.10.2. Characteristics of Existentialism

Following are the essential characteristics of existentialism:

1) **Existence Precedes Essence:** This philosophy begins from man, but from man as existent rather than man as a thinking subject, having a definite nature or essence. A man first exists, encounters himself, and defines himself afterwards. Existence comes before man is set with value or essence. It is because to begin with man is nothing, has no essence, he will be what he makes of himself. Man defines himself in his own subjectivity, and wanders between choice, freedom, and existential angst. Existentialism often is associated with anxiety, dread, awareness of death, and freedom.

2) **Importance of Subjectivity: S.Kierkegaard** has said that truth is subjective, subjectivity, objectivity and abstraction are illusion. Existentialism is the philosophy of subject rather than of the object. Each individual by probing into the depths of one's subjectivity can discover the truth of one's being and discover his authentic role in life. This is a creative process which gives rise to fresh insights.

3) **Man's Freedom:** The basic feature of human is his freedom that is unfettered and unrestrained. Society and social institutions are for the sake of man and not *vice versa*, as believed by idealists and others. There is no "general will" to which the "individual will" is subject.

4) **Criticism of Idealism:** Existentialism has emerged and developed as a reaction against idealism. Existentialist philosophers are highly critical of idealism and conceptualism. They criticize idealist's contention about universal element and man's good being subject to general good. They regard the search for essence a mistaken pursuit and according to them it is not the essence but existence which is real.

5) **Criticism of Naturalism:** The existentialist philosophers are also critical of the philosophy of Naturalism. According to Naturalists, life is subject to physical, biological and chemical laws, which in turn, are subject to the universal law of causation. Human acts are mechanical as the actions of an animal. This, however, is anathema to the existentialists and they strongly defend the freedom of man. As a matter of fact, man is so free, **according to J. P. Sartre**, that he is fearful for his freedom.

6) **Criticism of Scientific Culture:** With tremendous progress in science and technology, rapid industrialisation and urbanisation have taken place. This has given rise to crowded towns in which individual are lost. Everything is

done or happens on a large scale and all personal values, individual likes and dislikes are altogether lost sight. Today, it is not the individual who chooses his end; rather all decisions are made by computer or statistical laws and data. Thus, science has made the value of man negligible. This is why the existentialists are opposed to scientific philosophy and culture.

7) **Attention on Human Weakness and Security:** In this scientific life of today, the individual is leading a life of tension, worries, frustrations, fear and sense of guilt. His individuality is getting continually blundered; therefore for security of individuality the individual should be given an environment free of worries, anxieties and tension.

2.10.3. Principles of Existentialism

Some main principles of existentialism are described below:

1) **Concept of Authenticity:** This principle of existentialism follows from the assertion that we are all radically free to make our own "essence" and meaning of life, is the concept of authenticity. Authenticity, in the context of existentialism, signifies a condition in which one does indeed make one's self, as opposed to non-authenticity, a condition where one simply becomes a function of the roles one adopts. Authentic experience means to resolutely create a role for oneself as opposed to simply adopting a previously existing role in life; all existentialists agree that we all should live authentic lives as opposed to living strictly by social norms. Therefore, existentialism again asserts that we must develop our own meaning of life.

2) **Existential Angst:** Another principle of existentialism is that of existential angst. Angst, as **Sartre** notes, develops from our realisation that "We are doomed to be free." We have to develop everything; nothing is given to us. This awesome responsibility to create our own selves and our own meaning in life can be overbearing. Our free will not only exists, but is vital, in the philosophy of existentialism.

3) **The Intrinsic Absurdity of the World:** The absurd, in existentialist philosophy, refers how the world is indifferent to our needs and wants; the world is not going to give anything to us, so we need to create everything for ourselves, including our own meaning of life. Even the religious existentialists, such as **Soren Kierkegaard**, take the world to be absurd. There is no intrinsic justice or karma; good or bad things can happen to anyone, not only the ones that "deserve" it. Furthermore, the world places restraints on us through our facticity (factors we cannot control like birth place and inherited social standing). Again, this leaves us the task of creating our own values and systems to create meaning in the world.

2.10.4. Existentialism in Education

According to the existentialist philosophy, education should impart knowledge about the human condition and the choices that each person has to make in the students. Education is a continuous process of developing consciousness about the freedom to choose the meaning of one's responsibility. The total development of

personality through education is given the first priority by the existential philosophers. It aims at self-realisation. The modern education has made too much of objective knowledge therefore this thought became irrelevant. Value education is vital to acquire total development. Existentialist education is learner–centred. It gives full freedom to the learner to realise his/her essence because freedom is an unavoidable fact in essence seeking understanding. Education should transform being to be. According to existentialist educational philosophy, education should encourage learners to choose what to study. The modern education is designed in this manner. Those learners do not find difficulty in choosing what to study and how to study. Modern education system is based on freedom of choice and the students would be free to select from many available learning situations. It enables them to unleash their own creativity and self –expression.

2.10.4.1. Aims of Education

The existentialistic aim of education is humanitarian and humanist. The basic purpose of education is to enable each individual to develop his or her fullest potential for self-fulfilment. Aims of education according to existentialism comprise the following:

1) **To Develop the Authentic Self of the Child:** The first and foremost aim of existential education is to develop the authentic self of child. **Nietzsche** held that the duty of teacher towards students is "to liberate and empower individuals toward authentic, autonomous and creative life". Education should create consciousness for 'self'. The existentialists argue that persons are not only mind, but also feelings and emotions. Consequently, students must learn to feel, and to become an 'authenticated individual'. 'Becoming' requires conflict and frustration by which persons grow their personality and understanding. Existentialism's main concern is with the existence of 'self'. **Sartre** explained two modes of self and called them as self-in-itself and self-for-itself. **Self-in-itself** is what a person is at the moment and that is his facticity. **Self-for-itself** is what a person becomes in his life by making efforts. Education should help in the development of 'self-for-itself' of student. According to existentialism, students must develop a consistent scale of values; authenticate their existence by being committed to these values and so act as to be prepared to die for these values than to live without them. Dying for one's own country constitutes the supreme sacrifice.

2) **To Assist in the Development of Self-realisation in the Child:** Education should help the child to achieve self-realisation. "The student should become personally concerned with the realisation of his own nature and with the courage to be himself". Existentialism believes that a good education is one that assists each of us in seeing ourselves with our fears, frustrations and hopes, as well as the ways in which we use reason for good and ill. The first step in any education, therefore, is to understand ourselves. Existential education assumes the responsibility of awakening each individual to the intensity of his/her own selfhood (defining self as the phenomenon of the awareness of subjectivity). The self for existentialists constitutes choosing a free and responsible agent. A learning situation is called for in which the structure and significance of the self is meaningfully conveyed.

3) **To Prepare Child to Face Tragic Situations of Life:** Every individual has to face many tragic situations in his/her life. The most important and inevitable tragic event is death. One of the main aims of existentialistic education is to inculcate proper attitude towards death. Teachers must made student realise that death is not just negative but it has positive sides also. Education for death can be expelled into an experience for better understanding of good life and one's obligations in it. Man should be aware of his death in every moment of life. This realisation of death will help in enjoyment of each and every moment of his life due to the fact that he is prepared for death. Student must be taught that sometimes to die for an ideal is better than the life to betray it.

4) **To Inculcate Choice Making Power in Students:** Education should train men to make better choices and also give the idea that since his choices are never perfect, consequences cannot be predicted life is a continuous process of making choices and all choices are personal and individual. A man's life is a project and each of us is his own architect of life. Choice is always a necessary condition of human life, it is always, to some extent, inescapable, but it is only authentic choice that enables us to stand out as individuals. The basic function of the school is normative. It should act to encourage the maximum development of individual autonomy or free choice. The basic aim of existentialist education is to develop a sense of commitment to free choice.

5) **To Prepare Child for Social Adjustment:** Another aim of existential education is to prepare child for social adjustment. Education should be such that it makes the student able to see beyond personal interest and goal. Existentialists argue that social education should teach to respect for the freedom of all. Respect for the freedom of others is essential, for freedom is almost certain to conflict. Good education prepares man to will his freedom and at the same time, to will the freedom of all others. When he asserts the value of any action he is asserting a value with this universal appeal "I am responsible for myself and for all".

6) **To Develop Unique Personality of Child:** Every individual is unique. Education must develop in him this uniqueness. It must cater to individual differences. Existentialism disagrees with the standards made by universal education as it is made up for all and deals generally with the average and compels the student to confirm to the law of average instead of practicing his unique qualities. It does not pay attention to exceptional. For existentialists, every man has a unique variety of methods and organisations which should be developed accordingly.

7) **To Develop Sense of Responsibility in Child:** Existential education emphasises the importance of individual's responsibility as for them there is no escape from wholly individual responsibility. It is the duty of existentialist teacher to assist the student to assume responsible selfhood, to grow up and face the world responsibly. Existentialism holds that for all the choices people make they cannot blame others, whether that is their parents or society and they cannot even blame the conditions in which they find themselves.

Moreover, there is nothing to guide them in their choices; no principles or rules can guarantee that any choice is right. People must simply make their choice and accept the consequences though the consequences may be unpredictable. Every choice carries our complete personal responsibility.

2.10.5. Impact of Existentialism on Education

In the field of education the contribution of existentialism is as follows:

2.10.5.1. Existentialism and Curriculum

According to existentialism, curriculum symbolises a world of knowledge to explore. Such knowledge should provide concrete content for making free analysis and criticism and establish a firm foundation for the individual creative effort. Existentialism recognises the 'individual difference' and lays emphasis on diverse curricula suiting the needs, abilities and aptitude of the individual. Realisation of self forms part of the curriculum. Self-examination and not social obedience is the first lesson. According to existentialism, curriculum should be mainly liberal since "liberal learning is most likely to lay a foundation for human freedom". Curriculum should satisfy the immediate as well as the ultimate needs. It should be so designed that a student does have every experience that make up his life.

Existentialism emphasises educating traditional subject matter to make the student realise the givens of the world in which he has to exercise his freedom. By learning these subject matter student comes to know that although he has freedom to achieve his purpose in this world but he cannot do whatever he wants with it. Existentialism places great importance to the learning of humanities, i.e., history, literature, philosophy and art. "The existentialists believe that humanities have spiritual power". Through humanities man's aesthetic, emotional and moral productivities are exercised. Humanities reveal the inner feelings and thoughts of man, i.e., his guilt, sin, suffering, tragedy, death, hate and love. They deal with the essential aspects of human existence such as the relation between people, the tragic as well as the joyous side of human life, the absurdities as well as the sensibleness. These subjects are explored as a means of providing students with sensational experiences that will help unleash their own creativity and self-expression.

Arts reveal the true nature of man. In the study of artistic expression, the existentialists find anguished, pained, aspiring and striving voice of mankind, the visible agony and delight which cause real creativity and genuine existence. There is an urge for affirmation in art. Almost all works of art exhibit the struggle of man with their conscience, existing orders and fate. It is found that almost all existentialists were interested in works of art.

2.10.5.2. Existentialism and Methods of Teaching

According to existentialism, methods of teaching must develop the creative abilities in children. Education for creativity is most important for existentialists. They emphasise on application of such instructional techniques which appeal to

feeling, emotion, creativity and deeper meaning of life. Existentialists advocate Socratic Method of Teaching. Socratic Method of teaching was one of asking questions, refining answers, asking more questions and pushing the issue until some acceptable conclusion was reached. The teacher seeks to draw the information from students by means of skilfully directed questions. Students become aware of the working of their own mind by seeking the answer of teachers' questions. Thus he gets the truth and accepts it. This method is based on the assumption that knowledge is inborn but we cannot draw it out without expert help. Etymologically also education means 'drawing out'.

Existentialists favour the Socratic approach to teaching, as Socratic method is personal, intimate and an I/you affair in which knowledge and wisdom are achieved through the mutual interaction of two living beings, the teacher and the taught. "For existentialism what count is personal contact and not time table". According to existentialists, any method that is capable of testing the inner life without interfering the subjectivity of both the teacher and the taught is acceptable. Socratic Method has this quality it "tests the inner-life as a stethoscope sounds the heart". In Socratic Method, every presupposition got tested, all arguments are probed for their possible inaccuracy. In this way Socrates transferred into students' minds the excessive amount of knowledge and wisdom he himself possessed.

2.10.5.3. Existentialism and Teacher

According to the existentialists the teacher creates an educational situation in which the student may establish contact with himself, become conscious of it and achieve self – realisation. This requires existential approach in the teacher himself. He should also have an experience of self – realisation so that he may be capable of guiding the students in this process. The teacher's role is to help students define their own essence by exposing them to various paths they may take in life and creating an environment in which they may freely choose their own preferred way. Existentialist methods focus on the individual. Learning is self-paced, self-directed, and includes a great deal of individual contact with the teacher, who relates to each student openly and honestly.

2.10.5.4. Existentialism and Discipline

The student should feel completely free for realising his 'self'. Under the guidance of the teacher, the student should try to realise his 'self' through introversion. The student accepts the discipline prescribed by the teacher and does not become irresponsible. The purpose of freedom given to him should be to enable him to effect the full development of his individuality.

2.10.5.5. Existentialism and School

In education, existentialism focuses on the individual, seeking out a personal understanding of the world. Through this interpretation, each individual characterises for him or herself the concepts of reality, truth and goodness and as a result, schools exist to aid children in knowing themselves and their place in society. In existential school men's non-rational, i.e., his aesthetic, moral and

emotional self are more evident than his scientific, rational self. Existentialists are more interested in developing the effective side of man, his capacity to love, to appreciate and to respond emotionally to the world around him. The aim of school should be to nurture self-discipline and cultivate self-evaluation. Existentialism argues that continued pedagogical and psychological experimentation will avail nothing if the child is not reared in a humanising school.

The school should provide an atmosphere where the individuals develop in a healthy way. The school is primarily a place for having experience with life since existentialism, almost as much as pragmatism rejects the spectators theory of knowledge. So schools should try to immerse their students in life. The school should be a forum where students are able to engage in dialogue with other students and teachers to help them clarify their progress towards self-fulfilment. "Schooling must be seen as a bringing together of people, some in the position of guides and other in the position of supposed followers, but all having deeply serious concern always with them and not easily allayed if at all."

Democratic ideals should pervade the school. It should be the democracy of unique individuals who value differences and respect one another. Self-government, pupil participation in planning and the encouragement of a free atmosphere characterise the school. Mechanisation and impersonality should be neutralised in school. Computerisation of student's time-tables and work programmes and the use of programmed instruction, teaching machines and other equipment tend to decrease the personal contact between teachers and pupils. This impersonality is a hazard to the individual development and growth of the child's personality and therefore concern and respect for the individual student should be a feature of the school.

2.10.6. Educational Implications of Existentialism

Educational implications of Existentialism are given below:

1) The most important aim in education is to become a human person as one who lives and makes decisions about what he will do and be. "Knowing" is the sense of knowing oneself social relationship, and biological development, are all part of this becoming.

2) The school should provide an atmosphere where the individuals develop in a healthy way. Children learn better when relieved from intense competition, harsh discipline, and fear from failure. Thus, each child can grow to understand his own needs and values and take charge of the experiences for changing them. In this way self-evaluation is the beginning and end of the learning process, as learning proceeds, children are freely growing, fearlessly, by understanding individuals. In classrooms characterised by such an atmosphere young people becomes active, trustworthy, and responsible. Encouragement and acceptance by teachers foster trustworthiness and sense of security.

3) The aims of school tasks should be to nurture self-discipline and cultivate self- evaluation. Mass teaching and mass testing are not advocated. Primary emphasis must always be on the person as learner and not on the learning programme. The schedule must be flexible and open, and the teacher must build positive relationship between himself and his students.

4) Humanness prescribes the relationship between teacher and student. It indicates the teacher's role and his activities, the subject-matter to be studied, and the way this subject-matter is to be approached by the students and the reason for this approach. Humanness is opposed to programmes that depends on mechanical teaching. The human self, relative to a dynamic world, thus forms the key to educations.

5) The teacher is in the foreground and is the center of attention. Whereas in pragmatism, the teacher remains in the background, mostly as an observer or guide, here he initiates the act of education through his person and influences the lives of his students through his own life. His relationship with his students is not permissive, but disciplined and often opposing. Student resistance is often manifested during the process of instruction, but as resistance is natural and necessary in order that the student may retain his own being. The teacher welcomes challenges to his ideas from the students.

6) Democratic ideals should by provided to the school. Democracy must be the soil in which the individual grows. It should be the democracy of unique individuals who values differences and respect one another. Children and young people come to value difference and change, and also to share in the mutual respect for the value of work and the creativity of man. Self-government, pupil participation in planning, and the encouragement of a free atmosphere. Moral judgments are made, not according to traditional standards, but according to fitness of individuals. Teachers should avoid applying labels to children (such as "lazy", "slow learner", etc.) for individuals may indeed come to think of themselves this way. Children need positive evaluation, not labels. Good concepts creates issue in worthwhile behaviour.

7) Mechanization and impersonality should be counteracted in school. The tendency in contemporary society, particularly in the west, is towards the anonymity of collectivism. Information about individuals is recorded by data processing, on computerised cards. Students may be represented by cards, numbers, and symbols. Students' time-tables and work programmes are computerised. Thus, the relationship between the individual students and the school programme becomes an impersonal one. Besides this the use of programmed instruction, teaching machines and other equipment tend to decrease the personal contact between teachers and pupils.

In the existentialist philosophy, this impersonality is a hazard to the individual development and growth of the child's personality. Concern and respect for the individual student should be a feature of the school. Education in the contemporary, industrial and technological society may well be cleaned and strengthened by emphasis on man for himself.

2.10.7. Merits of Existentialism

Following are the merits of existentialism:

1) Existentialism is optimistic, it preaches the doctrine of action and emphasises the concept of freedom, responsibility and choice, it has exerted an increasing appeal to the educator, who has been shown the new horizons.
2) Interest is directed on the 'man' – his genuine or authentic self, his choices made with full responsibility of consequences, and freedom. It describes and diagnoses human weaknesses, limitations and conflicts.
3) Man cannot be explained by reason as the idealists emphasise. It traces the origin of all these and anticipates that man will overcome them. They say when a man comes to have a sense of meaninglessness of his life.
4) They do not want man to be philistine (one whose interests are material and common place) or mediocre who submerges himself. They want the 'transcendence' of man, which means that he should become more and more 'authentic'.

2.10.8. Demerits of Existentialism

Following are the demerits of existentialism:

1) The teacher's individual relationship and close understanding of every pupil's personality require a great deal of time and effort.
2) The concepts of 'Being', 'meaning', 'Person' are not very clear and appear nebulous. It is not easy to build up an educational programmed when the terminology for the objectives of the educational process is not clear.
3) Educational standards and practices that manipulate the child's behaviours in an arbitrary manner violate the principle of free choice.
4) Many teaching practices, testing procedures, and bureaucratic system of classifying children may be questioned.
5) Teachers who have learned to provide existential encounters for their students enable the learners, "to create meanings in a cosmos devoid of objective meaning to find reasons for being in a society with fewer and fewer open doors."
6) There are some major areas of conflict between atheistic existentialism and traditional. The former's complete denial of any forces outside the "human situation" and its rejection of any essential characteristic in man are contrary to traditional metaphysical beliefs. The radical subjectivity of existentialist epistemology, ethics, and aesthetics is also not in harmony with both traditional and many modern views of these issues.
7) Existentialist philosophy limits its application to the modern world, namely, the neglect of the scientific mode of knowing in their general theory of knowledge. After all, this is the "age of science" and complete philosophy of life cannot relegate the philosophy of science to a position of minor importance.
8) As an educational philosophy, existentialism, at least in its present form, does not provide an adequate basis for educational theory. Perhaps this state of affairs is due to the fact that most existentialists have given no serious consideration to the development of the educational implications of their fundamental philosophical tenets.

UNIT 3

Conceptual Framework of Curriculum

3.1. CURRICULUM

3.1.1. Meaning and Definition of Curriculum

Curriculum is the heart of education. It is the totality of all the learning to which students are exposed during their study in the school. For student, it is the thing from which teacher makes us to learn, for teachers courses of study provided for us to follow, for principal the courses for which units of credit are given, and for parents the fact that is in the textbooks.

The word **'curriculum'** has been derived from the Latin word **'currere'** which means 'a race' or 'race course' or 'to run/to proceed'. In 1576, **Petrus Ramus,** Professor at University of Paris, in his work, **Professio Regia,** was first to contribute in the field of education. Later in 1582, the term 'Curriculum' appeared to be used in University of Leiden. By the 17th century, the University of Glasgow also named its "course" of study as a "curriculum". By the 19th century, European universities routinely referred to their curriculum to describe both the complete course of study (as for a degree in surgery) and particular courses with their content.

In the early years of the 20th century, the traditional concept of the curriculum was that "it is a body of subjects or subject matter prepared by the teachers for the students to learn". It was synonymous to the "course of study" and "syllabus".

Curriculum may be defined as "The planned and guided learning experiences, and intended learning outcomes, formulated through the systematic reconstruction of knowledge and experiences, under the auspices of the school, for the learners' continuous and wilful growth in personal social competency".

According to Cunningham, "Curriculum is a tool in the hands of the artist (teacher) to mould his material (pupils) according to his ideas (aims and objectives) in his studio (school).

According to Brubacher, "Curriculum is a runway which one has to run to reach a goal or a course of study".

According to Spalding, "Curriculum is a strategy by which schools attempts to fulfil the goals of education".

According to Secondary Education Commission, "Curriculum is defined as the totality of experiences the pupil receives through multiple activities that goes on the school, in the classroom, laboratory, workshops, playground and in the numerous informal contacts between the teacher and the pupil."

According to Mudaliar Commission, "Curriculum includes all the learner's experiences in or outside that are included in a programme which has been devised to help him develop physically, emotionally, socially, spiritually and morally".

According to C. Ronald, "Curriculum includes all the learning experiences offered to all the learners under the direction of the school".

According to Kerr, "All the learning which is planned and guided by the school, whether it is carried on in groups or individually, inside or outside of school".

Furthermore, the curriculum defines "why, what, when, where, how, and with whom to learn". Thus, curriculum can refer to the entire programme provided by a classroom, school, district, state, or country. A classroom is assigned sections of the curriculum as defined by the school.

3.1.2. Nature/Characteristics of Curriculum

Nature of a curriculum may be explained on the following grounds:

1) **Curricula as a Set of Objectives:** Curriculum can be seen as a means of achieving specific educational goals and objectives. In this sense, a curriculum can be regarded as a checklist of desired outcomes. In the curriculum development process, generally speaking, the objectives are clear and specific in behavioural and observable terms.

2) **Curricula as Courses of Study or Content:** Curriculum can be understood as a process of selecting courses of study or content. In this sense, a curriculum also either describes or prescribes the content and goals of formal instruction but lays the means of instruction out of the foreground of focus. Although this use of the curriculum appears similar to the above-mentioned definition – Curricula as a Set of Objectives – in terms of the inclusion of goals, in fact, there is a different focus.

3) **Curricula as Plans:** A curriculum can be seen as a plan, or a sort of blueprint for systematically implementing educational activities. This sense of the term combines content with instructional methods and hence has a wider scope than the former two curricular paradigms because of the inclusion of methods. In this vein, **Tom** (1984) canvasses curriculum as "a plan for teaching or instruction". Similarly, **Pratt** (1994) conceives it as "a plan for a sustained process of teaching and learning" with a specific focus on content and the process of teaching and learning.

4) **Curricula as Documents:** Some people view curriculum as a document, an outline of a course programme that is written on a piece of paper. Thus, curriculum "has become associated with the official written programmes of study published by ministries or departments of education, local authorities or boards of education, and commercial firms or teams of educational specialists working on specially funded projects".

5) **Curricula as Experiences:** Instead of regarding curricula narrowly as formalised classroom content or prescriptive learning objectives, it may be useful to think of them more holistically as programmes for experiences.

Kelly (1999) identified three kinds of curriculum based on their nature:

1) **Planned Curriculum:** It means what is laid down in the syllabus.
2) **Received Curriculum:** It refers to the reality of students' experiences.
3) **Hidden Curriculum:** It is knowledge that implicit students learn in school.

3.1.3. Objectives of Curriculum

Its main objectives are as follows:

1) To attain defined goals of education.
2) To provide essential and useful knowledge to the learners.
3) To provide creative and flexible approaches to learning and teaching.
4) More focus on environmental education.
5) To provide vocational text matter.
6) To offer an innovative curriculum developed with the aspirations and interests of the student at the centre.
7) To make effective use of ICT and new technologies to motivate and inspire students.
8) To nurture close partnerships with local and international organisations, giving students a wide range of opportunities to experience the world of work.
9) To provide opportunities for students to extend their learning beyond the formal curriculum.

3.1.4. Principles of Curriculum

Curriculum is based on following important principles:

1) **Principles of Utility:** Curriculum should be useful rather than decorative. The curriculum must have practical utility for students. So there should be some provision for technical and vocational education in the curriculum.
2) **Principles of Child-Centredness:** Modern education is being considered as child-centred. So the curriculum should also be child-centred. It should be based on the child's needs, interests, abilities, aptitude, age level and circumstances.
3) **Principles of Community Centredness:** This principle states that the individual development and the social development of the child deserve equal attention in the society. His needs and desires must be in conformity with the needs and desires of the society, in which he lives. So, the values, attitudes and skills that are prevailing in the community must be reflected in the curriculum.

4) **Principles of Activity Centredness:** The curriculum should be based on the diversified activities of pupils. It should provide well selected activities according to the general interests and developmental stages of children. It should provide constructive, creative and project activities. The purposeful activities both in the class-room and outside the class-room should be provided.

5) **Principles of Interrelation of Subject:** This principle describes that the pupils are to be provided with selected experiences through various subjects and activities but these must be well integrated. Various subjects and activities have to serve the same ultimate purpose, the achievement of the aims of education. The activities and subjects should not be put in after-tight compartments but these should be inter-related and well integrated so as to develop the child holistically.

6) **Principles of Development of Culture and Civilisation (Conservative):** The main function of education is to preserve and transmit our cultural heritage. This is essential for human progress. Culture consists of traditions, customs, attitudes, skills, conduct, values and knowledge. However, the curriculum framers must make a suitable selection of the elements of culture, keeping in mind their educational value and the developmental stage of pupils.

7) **Principle of Creativity:** There should be provision in the curriculum to develop the creative powers of the child so that the children become a contributory member of the society. **According to Raymont,** "In curriculum that is suited to the needs of today and of the future, there must be definitely creative subjects."

8) **Principle of Flexibility:** At present time rapid developments are taking place in various fields. Consequently the needs of society are changing. The content of curriculum cannot be same for all times. It must be dynamic and change with the changing times and should reflect the latest trends in the field of education and psychology.

9) **Principle of Balance:** The curriculum must maintain a balance between subjects and activities, direct and indirect experiences, academic and vocational education, compulsory and an optional subject, formal and informal education, individual and social aims of education, etc.

3.1.5. Types of Curriculum

There are various types of curriculum which are used in the schools. These types of curriculum depend on the organisation of curriculum. There are different philosophical views on these curricula organisation. Having based on these views, various curriculums have been prepared for the learners. Some of them are as follows:

1) **Core Curriculum:** The simple definition for the word core is 'central', and this perfectly describes the intention of **core curriculum.**

Core refers to the 'heart' of experiences every learner must go through or fundamental knowledge that all students are required to learn in school.

A core curriculum is a curriculum, or course of study, which is deemed central and usually made mandatory for all students of a school or school system. The Core Curriculum is the set of common courses required of all undergraduates and considered the necessary general education for students, irrespective of their choice in major. The communal learning with all students encountering the same texts and issues at the same time and the critical dialogue experienced in small seminars are the distinctive features of the Core.

2) **Activity-Based Curriculum:** Active learning is anything that students do in a classroom other than merely passively listening to an instructors lecture. This includes everything from listening practices which help the students to absorb what they hear, to short writing exercises in which students react to lecture materials, to complex group exercise in which students apply course material to real-life situations or to new problems.

According to Tanner and Tanner, "Activity curriculum is an attempt to treat learning as an active process. Activity curriculum discards the boundaries and the curriculum was centred largely on areas of child interest. The objective of curriculum was child growth through experience."

According to Beans, "The major premise of activity movements was that learner ought to be active rather than passive particicpants in learning".

Activity-based curriculum includes a definite beginning and ending, a clear purpose, completed, contain and understandable directions, feedback mechanism and description of technology or tools being used in the exercise.

3) **Interdisciplinary Curriculum:** Interdisciplinary curriculum is a knowledge view and curriculum approach that consciously applies methodology and language from more than one discipline to examine a central theme, issue, problem, topic or experience. Skills and knowledge are developed and applied in more than one area of study. It views learning and teaching in a holistic way and reflects the real world, which is interactive.

According to Dictionary of Education, interdisciplinary curriculum is defined as "a curriculum organisation which cuts across subject-matter lines to focus upon comprehensive life problems or broad based areas of study that brings together the various segments of the curriculum into meaningful association".

According to Jacobs, interdisciplinary is "a knowledge view and curricular approach that consciously applies methodology and language from more than one discipline to examine a central theme, issue, problem, topic, or experience".

4) **Subject-Centred Curriculum:** The subject-centred curriculum is founded upon the belief that the curriculum is composed of separate and distinct subjects, each of which embraces a body of content and skills which will enable the learner to acquire knowledge of himself and his world. Traditionally, the "subject" in the subject-centred curriculum referred to what has popularly become known as "the 3R's" and the goal has centred on the acquisition of tools of literacy.

Frequently and often sincerely come the cries, "the elementary school is not teaching children to read"; "children in the elementary school cannot write or spell"; "we must return to the old standards for promotion where children must attain a definable achievement in each basic subject before moving on to the next grade".

The subject-centred curriculum might be described as – clearly definable goals in relation to the acquisition of facts, contents and skills, and security for teachers who, having taught the body of subject matter and skills, prescribed which have the assurance of having discharged their obligations.

5) **Learners-Centred Curriculum:** It is that curriculum which revolves around the interests, needs, abilities, development level and life of the learners. A learner is considered as the focus point much stress has been laid on child study and child psychology which helps to find out the various problems faced by the learners. Students enjoy the primary place and rest of the things have been treated as secondary so it places more emphasis on student rather than the subject. It is accordance with the individual difference which exists among the children. It touches all aspects of the life of the pupil and holds the opinion that education is life. The need and the interests of the pupil facilitate their learning. The environment which is congenial to them, ways, manner producer and approaches which cause affective learning among them have been utilised under this curriculum. So is based on the activity and actions of the child.

6) **Child-Centred Curriculum:** This type of curriculum emerged from the extensive research carried on in the early twentieth century by **John Dewey and followers**. Laboratory centres such as that established at the University of Chicago under John Dewey's direction became the spur to the establishment of a number of private schools committed to the child-centred philosophy.

While few public schools were committed whole-heartedly to the new experimental approach in the education of children, many were vitally influenced by the child-centred philosophy. Nailed-down furniture began to be replaced by movable furniture; learning-by-doing rather than passive absorption of subject matter assumed new significance. First-hand experiences in neighbourhood and community enlarged the book-bound world of the child.

The "activity programme", the "unit of work", the recognition of need for using and exploring many media for self-discovery and self-direction became common characteristics of programmes founded upon the new philosophy. Most of all, a new respect for the child, a new freedom of action, were incorporated into curriculum building in the child-centred school. And, of course, teachers with the "new look" became the objective of teacher-education institutions. This was the period of experimental teacher-education programmes, focusing upon the personal development of the students' as well as her professional equipment. However, the weaknesses of the child-centred philosophy were early evidenced. These weaknesses centred chiefly in the possibilities for misinterpretation and in the neglect of adequate consideration of the matrix in which the education of children must occur.

7) **Problem-Centred Curriculum:** It is conceived as the framework in which the child is guided toward maturity within the context of the social group. It assumes that in the process of living, children experience problems. The solutions to these problems enable children to become increasingly able to attain full development as individuals capable of self-direction, and to become competent in assuming social responsibility. It attempts to guide children in the recognition of problems and in seeking solutions. Problems and their solutions through broad and deep experiences becomes the core of the problem-centred curriculum.

The strengths of the problem-centred curriculum are many. **For example,** the problem-centred curriculum places emphasis on the developmental needs of children and demands of teachers' knowledge and understanding of the processes of human growth and development and of learning. Also, it places equal emphasis upon the needs of society and demands of teachers' knowledge and understanding of the forces which shape society.

Social sciences, natural sciences, arts, and literature must be utilised if the curriculum is to be effective in fostering the best interests of a people.

8) **Society-Centred Curriculum: According to Cortes,** he defines this curriculum as the massive, on-going, informal curriculum of family, peer groups, neighbourhoods, churches, organisations, occupations, mass media, and other socialising forces that "educate" all of us throughout our lives.

This type of curricula can now be expanded to include the powerful effects of social media (e.g., YouTube, Facebook, Twitter, etc.) and how it actively helps create new perspectives, and can help shape both individual and public opinion. It is implied by the very structure and nature of schools, much of what revolves around daily or established routines.

9) **Hidden Curriculum:** It is knowledge that implicit knowledge students learn in school. It is implied by the very structure and nature of schools, much of what revolves around daily or established routines.

Longstreet and Shane (1993) offer a commonly accepted definition for this term-the "hidden curriculum," which refers to the kinds of learning children derive from the very nature and organisational design of the public school, as well as from the behaviours and attitudes of teachers and administrators.... "

Examples of the hidden curriculum might include the messages and lessons derived from the mere organisation of schools – the emphasis on sequential room arrangements; the cellular, timed segments of formal instruction; an annual schedule that is still arranged to accommodate an agrarian age; disciplined messages where concentration equates to student behaviours were they are sitting up straight and are continually quiet; students getting in and standing in line silently; students quietly raising their hands to be called on; the endless competition for grades, and so on. The hidden curriculum may include both positive and negative messages, depending on the models provided and the perspectives of the learner or the observer.

3.1.6. Process of Curriculum

In the process of curriculum, the following steps are involved:

Step 1: Curriculum Planning: It is a process in which participants at many stages make decisions about what the purpose of learning ought to be, how these purposes might be carried out through teaching-learning situations and whether the purpose and means both are appropriate and effective. This is the process of gathering, sorting, selecting, balancing, and synthesising relevant information from various sources in order to design those experiences that will assist learners in attaining goals of the curriculum.

Step 2: Curriculum Design: William M. Alexander stated that the school curriculum has a framework or structure which is known as 'design'. The curriculum design provides a basis for classifying and organising the curriculum opportunities offered by the school. It is the pattern or structure of a curriculum. It is the arrangement or organisation of the components of the curriculum.

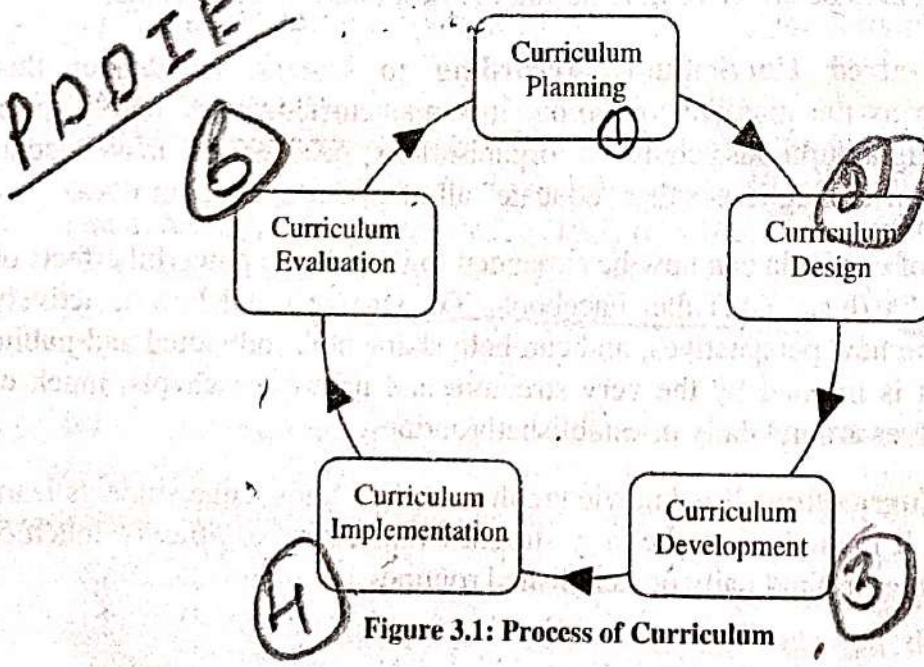


Figure 3.1: Process of Curriculum

Step 3: Curriculum Development: It is a specialised area of work which expects a teacher to have a deep understanding of the underlying concepts of curriculum, and also the skills to systematically design learning experiences to achieve socially desired goals. It is a continous and never ending process.

Step 4: Curriculum Implementation: It is the process of proper management of the curriculum. It is the basis of curriculum implementation and transaction. It consider the social philosophy of the society, nature of course of study, type of examination system, growth and development of the students, and recommendations of commissions and committees related with curriculum.

Step 5: Curriculum Evaluation: It is a process of delineating, obtaining and providing information useful for making decisions about curriculum development and implemeenntation. This process of evaluation is undertaken in order to determine the strenghths and weaknesses of an existing or an under-construction curriculum so that improvements can be made. It is no one shot affair. It is dynamic and cyclic process.

There are different bodies which are involved in the preparation of curriculum. These are curriculum administrators, principles, school boards, communities, law makers, educational researchers, teacher educators, non-school educators, and publishers, state department of education, parents, students, project directors, authors, testers, accreditors, lobbyists, and philanthropists.

3.1.7. Organisation of Curriculum

Curriculum organisation is the process of selecting curriculum elements which forms the subject, the current social life and the students experience then designing the selected curriculum elements appropriately so that they can form the curriculum structure and type.

In the process of organising the curriculum:

1) Teacher led discussions of assigned readings;
2) Students raising questions and selecting those to be answered with the use of a variety of experiences;
3) A combination of brief lectures and related hands-on approaches in learning;
4) Student/teacher planning of on-going learning opportunities as well as of required work to be completed by learners; and
5) Cooperative assessment of student achievement, involving learners and the teacher.

The above five enumerations tend to stress the correlated/fused procedures of curriculum organisation. Thus, the teacher might well choose a separate subjects strand of instruction whereas students with questions to be answered would delve into knowledge from several academic disciplines.

Some types of curriculum organisation centre on single subjects, while others are shaped to examine broader connections between multiple disciplines. Both of these curriculum designs may additionally incorporate central concepts and problem solving methods to provide effective outcomes through engaging learning experiences.

Educational course curricula may emphasise learning outcomes by using interactive techniques that encourage students to communicate knowledge through demonstration. This organisational framework identifies student progress based upon individual assessments, and can be useful in recognising the strengths and weaknesses of a specific student to develop personalised success strategies. Here, instruction is focused on the learner's academic performance through practical activities organised to cultivate conceptual understanding.

Different approaches towards curriculum organisation can also vary in terms of individual learning styles and multiple forms of intelligence. A curriculum designed to accommodate a variety of learning styles may benefit all students in a holistic classroom setting rather than only those who learn from a specific format. Creating activities that measure learning skills can also allow students to acquire new skill sets from one another while adhering to curriculum guidelines. Inquiry projects, e.g., motivate learners to participate in their curriculum as active leaders within their own collaborative peer groups. In this context, students can organise curricula themselves with the assistance of their instructors and each other.

3.1.7.1. Principles of Curriculum Organisation

Following are the principles of curriculum organisation:

1) Provides scope and sequence with flexibility.
2) Provides a common body of educative experiences, which are essential in meeting special interests and needs.
3) Be consonant with the manner in which learning takes place.
4) Implement the attainment of stated objectives, and encourage the evaluation of pupil growth and development in terms of these objectives.
5) Consider to the individual learners, and involve them in cooperative curriculum planning and active learning venture.
6) Relate to the total educational picture in a way to affect favourably the learning climate in the school and in the community.

3.1.7.2. Approaches of Curriculum Organisation

Following are the main approaches of curriculum organisation:

1) **Integrated Approach:** The concept of integrating curriculum is nothing new. It's been around, in fact, since the 1800s and was advocated by such well-known educational theorists such as **John Dewey** and **Meredith Smith**. It has gained recent attention, however and more and more educators think that it is the best way to teach. It is a curriculum in which subject matter boundaries are ignored, all subjects being taught in a relation to broad areas of study and in relation to one another as mutually associated to some genuine life relation.

   Curriculum integration can be described as "an approach to teaching and learning that is based on both philosophy and practicality". It can generally be defined as a curriculum approach that purposefully draws together knowledge, skills, attitudes, and values from within or across subject areas to

develop a more powerful understanding of key ideas. Curriculum integration occurs when components of the curriculum are connected and related in meaningful ways by both the students and teachers.

Integrated curriculum is a way to teach students that attempts to break down barriers between subjects and make learning more meaningful to students. In its simplest conception, it is about making connections. The integrated approach aspires to help pupils obtain a coherent view of science by establishing numerous links between the various branches of science. Integrated science integrates the perspectives of sub-disciplines such as biology, chemistry, physics, and earth/space science. Through this integration, teachers expect students to understand the connections between the different sub-disciplines and their relationship to the real world.

Curriculum integration enables teacher to:

i) Identify the connections within and among the content of subject areas,
ii) Provide a relevant context for learning, based on the needs of students,
iii) Assess students' skills and understandings in a variety of learning contexts,
iv) Manage the content of the programme of studies more easily because outcomes from different areas or key learning skills are both addressed at the same time and reinforced, and
v) Increases student's motivation and participation.

2) **Interdisciplinary Curriculum:** An interdisciplinary curriculum combines several school subjects into one active project or is organised to cut across subject-matter lines, bringing together various aspects of the curriculum into meaningful association. It focuses on broad areas of study since that is how children encounter subjects in the real world-combined in one activity. In the interdisciplinary curriculum, the planned learning experiences not only provide the learners with a unified view of commonly held knowledge (by learning models, systems, and structures) but also motivate and develop learners' power to perceive new relationships and thus to create new models, systems, and structures. Interdisciplinary curriculum involves using the knowledge view and curricular approach that consciously applies methodology and language from more than one discipline to examine a central theme, issue, problem, topic, or experience. In inter-disciplinary science curriculum science is treated as one discipline, a combination of separate disciplines such as physics, chemistry, biology.

3) **Concentric and Spiral Approaches:** The whole curriculum is spread over a number of years. a general treatment of almost all the topics are attempted at the beginning and it is developed in successive years according to the mental development of the pupils. In the beginning of the course, the whole aspect is given to pupils in a simplified way. In the next year more and more details of its parts are added. It follows the maximum of teaching, such as from whole to part, simple to complex, easy to difficult, etc. Among educationist of modern times, Burner is the main exponent of the approach is maintained.

Sometimes this approach is referred to as concentric approach. But the term "spiral approach" is preferred to the other. The term spiral gives the additional implication that while attempting gradation the linkage too is taken care of and the continuing of the topic concerned is never broken.

4) **Nature Study:** It is defined as "learning to be really alive to the world around". The use of the word 'study' implies that independent work must be done by the pupil, and while books, pictures and models are valuable aids in the teaching, the subject matter is nature herself.

Aims of Nature Study

i) The cultivation of interest in the world around.
ii) The development of habits of careful observation and later on coherent reasoning.
iii) The cultivation of the power of expression.
iv) The free development of individuality of the pupil.

5) **Nature Rambling:** The main criteria are the experience of the child. Child is considered as the rambler in his environment. The materials the child is likely to meet with the scientific situations be likely to face with are chosen and arranged in the science course. Accordingly the science course of the first year may contain the elementary study of planets, trees sun, moon, birds, stars, and rain. In the second year the study of rock, different kinds of rock, kinds of water, purification of water, solar system, seasons and like. In the third year the study of sand, minerals, atmosphere, soil, eclipse and shadows. It lays foundation for advanced studies because all natural science is specialised forms of nature study. It develops the power of observation reasoning and it establishes good relationships between the child and his environment.

3.1.7.3. Organising Curriculum Components

Following are the main components of curriculum organisation:

1) **Curriculum Aims, Goals and Objectives:** The formulation of objectives is at the forefront of selection and organisation, great significance is placed on the assurance of well-defined and well-constructed objectives, as well as the identification of the key sources of objective formulation.

Aims of Elementary Education

i) Provide knowledge and develop skills, attitudes, values essential to personal development and necessary for living in and contributing to a developing and changing society,
ii) Provide learning experiences which increase the child's awareness of and responsiveness to the changes in the society,
iii) Promote and intensify knowledge, identification with and love for the nation and the people to which he belongs, and
iv) Promote work experiences which develop orientation to the world of work and prepare the learner to honest and meaningful work.

Aims of Secondary Education

i) Continue to promote the objectives of elementary education, and

ii) Discover and enhance the different aptitudes and interests of students in order to equip them with skills for productive endeavour and or to prepare them for tertiary schooling.

Aims of Tertiary Education

i) Provide general education programmes which will promote national identity, cultural consciousness, moral integrity and spiritual vigour,

ii) Train the nation's manpower in the skills required for national development,

iii) Develop the professions that will provide leadership for the nation, and

iv) Advance knowledge through research and apply new knowledge for improving the quality of human life and respond effectively to changing society.

2) **Curriculum Content or Subject Matter:** Educational objectives are necessarily stated as expected outcomes, thus opening learning opportunities for students to achieve the said objectives through the "selected subject matter". Content selection is able to meet the overall needs of learners in a balanced and realistic manner, and is compliant with key selection criteria, namely, significance (the basic/essential), validity (accuracy and how it relates to expected outcomes), relevance (social implications/ value), utility (usefulness and benefits), interest (will learners be interested?), and learnability (can it be learned). It must be noted that the curriculum is finite – time is both its great ally and inevitable opponent. Thus, the focus turns to scope and sequence in organising curriculum content, and the key here is to find the right balance of both within the limitations set by time, all the while putting in place integration and continuity of the selected content.

3) **Curriculum Experience:** Learning experience differs from content. **According to Tyler,** "The term 'learning experience' is not the same as the content with which a course deals nor the activities performed by the teacher. The term 'learning experience' refers to the interaction between the learner and the external conditions in the environment to which he/she can react. Learning takes place through the active behaviour of the student." – Thus, educators and curriculum developers are presented with another conundrum – selecting and organising learning experiences that can motivate students to be actively involved in the learning process, so that expected outcomes, i.e., educational objectives, can be met.

4) **Curriculum Evaluation:** To determine the extent to which the objectives are being attained, the tools of evaluation are used to provide evidence. Nature of evaluation tools is based on the objectives decided and the learning experiences given. The result from the evaluation is used as a feedback for improving the teaching-learning process.

Thus, we find a closed relation between objectives, learning experience and the evaluation tools.

3.1.7.4. Organisation of Curriculum According to Secondary Education Commission

The Commission has laid down the following different curriculum for these two stages in the secondary education:

Curriculum for the Middle Schools

The Commission has recommended the inclusion of the following subjects:

1) English,
2) Social Studies,
3) General Science,
4) Mathematics,
5) Art and Music,
6) Craft, and
7) Physical Education.

Curriculum for High and Higher Secondary Schools

For this stage of education, the commission has suggested that there should be a diversified course:

1) **Compulsory Subjects or Main Subjects:** The Compulsory subjects shall include the following:
   i) Mother tongue or regional language or composite course of the mother tongue and a classical language.
   ii) One other language to be chosen from among the following:
      a) Hindi for those whose mother tongue is not Hindi.
      b) Elementary English (for those who have not studied English in the middle stage.
      c) Advanced English (for those who have studied English at the earlier stage).
      d) A modern Indian language (other than Hindi).
      e) A modern foreign language (other than English).
      f) A classical language.
   iii) **Social Studies**: General course (for the first two years only).
   iv) **General Science**: Including Mathematics - General course (for the first two years only).
   v) **One Craft** to be chosen out of the list given below:
      a) Spinning and weaving,
      b) Wood Work,
      c) Metal Work,
      d) Gardening,
      e) Tailoring,
      f) Typography,
      g) Workshop Practice,
      h) Sewing, Needle Work and Embroidery, and
      i) Modelling.

2) **Optional Subjects:** Three subjects from one of the following groups:

Group-1 (Humanities)

a) A classical language or a third language from "one" not already taken,
b) History,
c) Geography,
d) Elements of Economics and Civics,
e) Elements of Psychology and Logic,
f) Mathematics,
g) Music, and
h) Domestic Science.

Group-2 (Sciences)

a) Physics,
b) Chemistry,
c) Biology,
d) Geography,
e) Mathematics, and
f) Elements of Physiology and Hygiene, (not to be taken with Biology).

Group-3 (Technical)

a) Applied Mathematics and Geometrical Engineering,
b) Applied Science,
c) Elements of Mechanical Engineering, and
d) Elements of Electrical Engineering.

Group-4 (Commercial)

a) Commercial Practice,
b) Book-keeping,
c) Commercial Geography or Elements of Economics and Civics, and
d) Shorthand and Typewriting.

Group-5 (Agriculture)

a) General Agriculture,
b) Animal Husbandry,
c) Horticulture and Gardening, and
d) Agricultural Chemistry and Botany.

Group-6 (Fine Arts)

a) History of Art,
b) Drawing and Designing,
c) Painting,
d) Modelling,
e) Music, and
f) Dancing.

Group-7 (Home Science)

a) Home Economics,
b) Nutrition and Cookery,
c) Mother Craft and Child Care, and
d) Household Management and Home Nursing.

3.1.8. Factors Affecting Curriculum

There are various factors which affect curriculum that are as follows:

1) **Government Policies and Rules:** Policies, practices, and resources of the government, states, districts, schools, and teachers all play roles in influencing the development of curriculum and instructional programmes, their implementation, and thus, what is actually taught to particular students. Some state policies directly address the intended curriculum and the resources needed to enact it, as well as other facets of the education system that affect curriculum, such as regulations governing remedial or special education programmes. State policies addressing student access to classroom laboratories and information technologies can also influence what is taught.

2) **Social Changes:** These changes include religion, culture, and social groupings that affects curriculum because these characteristics influence the types of topics and methods for teaching information. Developing relevant curriculum takes into account society's expectations, accommodating group traditions and promoting equality. Society has its own expectations about the aims and objectives that should be considered when designing the curriculum. It also has a perception of what the product of the school system should look like. It is therefore necessary for curriculum designers to take into account these societal considerations. **For example,** Subjects which has gender education and political economy have proved difficult to include in the curriculum because of the resistance from some religious groups.

3) **Psychological Behaviour:** Many students with a masters or Ph.D. degree in developmental psychology work in educational settings as school psychologists, which makes sense when considering the emphasis placed on the formative years. However, there are several developmental psychology concentrations available on which students can focus:

i) Developmental studies for educators,
ii) Aging,
iii) Infancy, childhood or adolescence,
iv) Lifespan development, and
v) Biological bases of development.

For example, the developmental psychology curriculum examines the changes in personality, cognitive ability, and behaviour throughout the lifespan. Therefore, in addition to preparing themselves for a rewarding career, students enrolled in developmental psychology curricula will also learn and understand more about themselves as they study the scientific conclusions made by experts in the field.

4) **Economic Conditions:** These conditions also influence curriculum development. Curriculum developed for in-house training in corporations focuses on educating employees for promotions that bring better returns in profits. Nations financing education expect an economic return from educated students contributing to the country's economy with global competition abilities in technical fields. **For example,** Nations financing education expect an economic return from educated students contributing to the country's economy with global competition abilities in technical fields.

5) **Technological Changes:** Technology-driven curriculum development is the norm of the 21st century. The computer technology of the 21st century influences curriculum development at every level of learning. Learning centres and classrooms increasingly provide computers as requisite interaction for studies among students. Use of technological multimedia influences educational goals and learning experiences among students. **For example,** an undergraduate and graduate degree in computer technology gaining in popularity day by day.

6) **Environmental Influences:** Environment issues affect curriculum development. World awareness and action toward reversing and ending pollution continues affecting curriculum development. Typical elementary classrooms teach recycling and healthy environmental practices. **For example,** Higher education in Science offers environmentally focused degrees, such as Environmental degree, Biotechnology degree, etc.

3.1.9. Importance of Curriculum

Curriculum provides several benefits, such as providing a structure for an educational course and having an end goal that teachers set for their students to reach. Curricula vary widely in structure and complexity, but are valuable for many different areas of education, including linguistics, mathematics and science. Curriculum is in fact the 'warp' and woof of the whole educational process. Its importance may be summed-up as follows:

1) **Achievement of Educational Aims:** Merely defining the aims of education is futile. There should be well planned efforts to achieve the aims of education. We must think of knowledge, activities, experiences and other influences which help in the achievement of aims of education.

2) **Useful for Teachers:** The teacher is required to achieve the aims of education. For that purpose, he has to employ suitable instructional methods and procedures. But this he can do only when he knows what efforts he is to make and in what order. In other words, he should know the content of curriculum which consists of subjects, activities and experiences in the properly graded form.

3) **Criteria of Suitable Teachers:** It is curriculum which can show what types of teachers are required in the schools. We should know what type of work they are required to do and whether this is according to the requirements of curriculum.

4) **Selection of Suitable Methods:** Curriculum enables the teacher to select suitable methods of teaching. 'How to teach' will be determined by 'what to teach'.

5) **Reflects Trends in Education:** Curriculum is a means to achieve the aims of education which are dynamic and changes with the changing social requirements. Naturally, the curriculum will reflect the trends in education.

6) **Providing Suitable Knowledge:** Curriculum should include suitable knowledge which will help in the achievement of educational aims.

7) **Providing Suitable Activities and Experiences:** Curriculum includes well selected activities and experiences needed for the development of pupils according to social requirements.

8) **Providing Wholesome Influences:** Curriculum should provide wholesome school programme to develop the desirable behaviour patterns in the pupils.

Thus, we see that curriculum is an important instrument or means to achieve the ends of education. It is important:

1) **In Elementary Schools:** In these schools, the curriculum is primarily drawn by the educational boards or some central society. They study the needs of the kids and all other feasibilities before selecting courses and drafting a curriculum. Here, the students have least choice in their subjects and study based on a universal curriculum, which works on all sections of the students' psyche and aid in the total development of the student. No area is left untouched.

   Hence, the curriculum aids in the proper development, while the child comes to terms with his or her own inclination. Therefore, at primary school levels, the curriculum aims at providing a structured platform, which gives every child an equal opportunity to excel.

2) **In High Schools:** At this levels teenagers can take their own liberty in choosing their path. Though complete autonomy does not rest with a student, a level of choice is very evident. This helps in the development of the teenager, with added importance of being given the field of his own choice. At this stage, the development is more focused and rampant, enhanced through a proper curriculum. Without an effective curriculum, a student would not be able to understand or meet the challenges of the society.

3) **At College and Higher Education:** At a higher stage of education, an unprecedented autonomy is provided to the students. The students can opt for a more focused curriculum, based on their choice of subjects. A student will graduate, post-graduate or attain a doctorate based on the choice of his subjects and the mode of his study, both or either one determined by him. The curriculum here is reduced to just a framework that is very flexible yet very important. The curriculum chosen by the student will determine the shape of his career. A curriculum prepares an individual with the knowledge to be a successful, confident and responsible citizens.

3.2. CURRICULUM CONSTRUCTION

3.2.1. Concept of Curriculum Construction

Curriculum is the crux of the whole educational process. Without curriculum we cannot conceive any educational endeavour. School curriculum of a country like its constitution reflects the ethos of that country. Curriculum is an important element of education. Aims of education are reflected in the curriculum. In other words, the curriculum is determined by the aims of life and society. Aims of life and society are subject to constant change. Hence, the aims of education are also subject to change and dynamic. The aims of education are attained by the school programmes, concerning knowledge, experiences, activities, skills and values. The different school programmes are jointly known as curriculum. Thus, the importance of the concept of curriculum construction is viewed differently by different people.

3.2.2. Meaning & Definition of Curriculum Construction

Curriculum is an important element of education. Aims of education are reflected in the curriculum. The aims of education are attained by the school programmes, concerning knowledge, experiences, activities, skills and values. The different school programmes are jointly known as curriculum.

Curriculum organisation is a scientific process which involves basic principles on which its credibility exists. It is not just collection of topics, because it reflects ethos (philosophy/culture) of the society, themes of the subject and learning variability.

Curriculum construction may be defined as "a logical step-by-step procedure based on behavioural or managerial approaches to curriculum and rooted in scientific principles of education."

3.2.3. Principles of Curriculum Construction

The main principles of curriculum construction are stated below:

1) **Aims of Education and Objectivity:** In framing the curriculum one should take into consideration the aims and objectives of education, because there are various complexities found in one's life. So, keeping in mind the aims and objectives of education curriculum should be constructed that reflects the complexities of life.

2) **Principle of Child Centredness:** The modern education has become child centred. So, the curriculum should be framed according to the actual needs, interests and capacities of the child.

3) **Principle of Community Centredness:** Though the child's development and growth is the main consideration of curriculum construction, yet his social behaviour is also to be suitably developed, both the individual development and the social development of the child deserve equal attention. He is to live

in and for the society. Therefore, his needs and desires must be in conformity with the needs and desires of the society in which he is to live. The values, attitudes and skills that are prevailing in the community must be reflected in the curriculum. However, the society is not static. It is dynamic. Its needs and requirements are changing with the rapid developments taking place in all fields. While working for the development, this factor cannot be ignored.

4) **Principle of Conservation:** One of the main functions of education is to preserve and transmit our cultural heritage. Man has conserved experiences very carefully for better adaptability. Education is regarded as a means of deserving the cultural heritage of humanity. The school serves two-fold functions in this regard- preservation of the past experiences and transmission of experiences.

5) **Principle of Creativity:** Education not only conserves that past experiences of humanity but also helps an individual to develop his innate potentialities. There should be provision in the curriculum to develop he creative powers of the child so that he becomes a contributory member society. **According to Raymont**, "In curriculum that is suited to the needs of today and of the future, there must be definitely creative subjects."

6) **Principle of Forward-Looking:** The aim of life-centred education is not limited to the present life-situations in the family and society. Hence, education must prepare the child for shouldering future responsibilities. So in framing the curriculum we must take into consideration the future needs of the child as well as the needs of the society.

7) **Principle of Variety and Flexibility:** The curriculum should include such activities and experiences, which may facilitate his normal development. The curriculum for girls should naturally be different from that of boys; boys and girls have different needs and attitudes.

8) **Principle of Integration and Correlation:** Subjects should be arranged logically and psychologically in accordance with the child's developing interests.

9) **Principle of Learning Ability:** Every item should be learnt. An item should not only be learnable, it should also have utility.

10) **Principle of Individual Difference:** The curriculum should be framed in such a way that every individual can have opportunity for self-expression and development. The curriculum should be based on the psychology of individual difference, which can meet the complexities of modern democratic society.

11) **Principle of Social Relevancy and Utility:** Subjects should not be determined on the basis of their disciplinary value but on the basis of their intrinsic value, social relevancy and utility.

12) **Principle for Utilisation of Leisure:** Variety of subjects such as games and sports, fine arts, subjects of aesthetic value are to be introduced in the school programme to utilise leisure.

13) **Principle of Time:** Relative significance and importance of each subject in the curriculum has to be judged and determined in the light of the time available in the timetable, which is regarded as the mirror of the school programme.

14) **Principle of Balance:** The curriculum must maintain a balance between subjects and activities, between direct and indirect experiences, between academic and vocational education, between compulsory and optional subjects, between formal and informal education, between individual and social aims of education, etc.

3.2.4. Stages of Curriculum Construction

Hilda Taba has given following four steps of curriculum construction:

1) **Identification of Objectives:** The curriculum is evaluated in the light of educational objectives identified for preparing learning experiences. These objectives include cognitive, affective, psycho motor creativity and perceptions. The evidences are collected for the identification of the objectives.

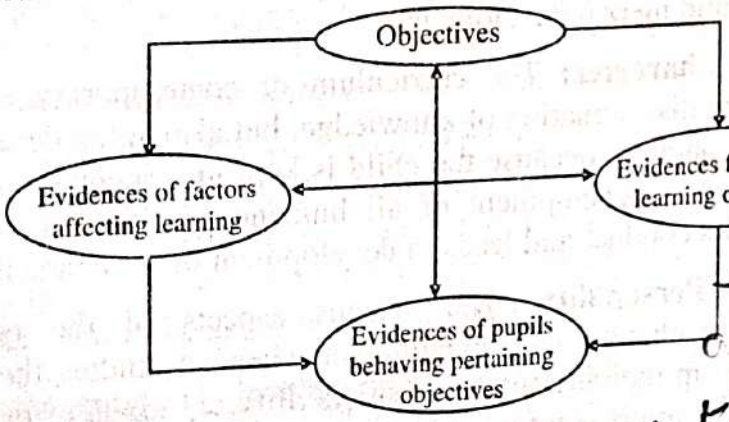


Figure 3.2

2) **Evidence for Teaching-Learning Operation:** Appropriate teaching method, teaching technique and audio-visual aids are used for generating appropriate learning situations, so that desirable objectives can be achieved. Evidences are collected for the learning experiences.

3) **Evidences of Factors Affecting Learning:** The evidences are collected for teaching-learning operations such as motivation reinforcement which help in learning of the student. This influences the learning exercise. Audio-visual aids make learning experiences interesting. The students do not memorise the content.

4) **Evidences of Pupil Behaviour Pertaining Objectives:** The utility of the curriculum is evaluated on the basis of changes of behaviour. These are evidences for realising the education objectives. The examination system is objectives-centred. It is both qualitative and quantitative. An attempt is made to assess the total change of behaviour.

3.2.5. Importance of Curriculum Construction

The curriculum construction is important at various levels of education:

1) **Achievement of Educational Aims:** The curriculum is constructed carefully in order to achieve the aims set for education, and therefore its advantage is that it helps in achieving these aims. In the absence of a curriculum it would be impossible to do anything systematically.

2) **Limits of Teaching and Learning:** In order to implement the educational programmes properly in different schools, it is necessary to determine in advance the body of knowledge to be acquired by the educands at different levels of education, and also the amount of teaching to be done by the educators. This can only be fixed on the basis of the curriculum. It helps in determining the work of the educator as well as that of the educand.

3) **Dissemination of Knowledge:** The aim of education is the dissemination of knowledge, and this is also the aim of the curriculum. By studying the various subjects laid down in the curriculum, the educand acquires knowledge in conformity with his abilities and level of intelligence. Different kinds of curricula are constructed for imparting education at different stages in the child's allround mental development.

4) **Development of Character:** The curriculum of contemporary education aims not only at the dissemination of knowledge, but also at the development and formation of character because the child is kept in a social environment which encourages the development of all humane qualities in him. This improves the child's conduct and leads to development of his character.

5) **Development of Personality:** The various aspects of the educand's personality undergo change and development when he studies the various subjects prescribed in the curriculum, acquires different kinds of experience and adjusts or adapts to different sets of circumstances.

6) **Development of Citizenship:** In almost all modern States, development of citizenship is considered to be one of the major responsibilities of education, and the curriculum is designed with this end in view.

7) **Discoveries and Research:** At the highest level of education, the curriculum is designed to encourage research and make inventions.

3.2.6. Modern Trends in Curriculum Construction

There are various modern trends in curriculum construction which influence it highly. These trends are:

1) **Digital Diversity:** Present age is an age of ICT which has influenced the human life. Technology has made various tasks easy, convenient and of quality. To survive in the concern field it is necessary for everyone to have a knowledge and skill of latest technology. Education makes a man enable to contribute, it strengthens his capabilities. For the effective transaction of curriculum ICT is must.

2) **Need-Based Curriculums:** Researches in all the fields resulted into specialisation. Need based curriculum is the foremost need of the present

education system. Many universities are developing need based short-term programmes for this purpose. e.g. Mumbai University has introduced courses like certificate course in PowerPoint, certificate course in Tally, certificate course in Marketing.

3) **Modular Curriculum with Credit Base System:** Modular curriculum gives real freedom of learning especially in the open learning system his approach has been adopted at first but now majority of traditional universities also accepting his system; this is a real emerging trend in the modern curriculum.

4) **Online Courses:** Need based and choice based curriculums are available online also. **For example,** course era.com has introduced many useful need-based courses for free of cost. Government also takes initiative for this, **e.g.,** Right to Information certificate course has been introduced by Government of India to the Indian people. This course is free and available online.

5) **21st Century Skills:** All the curriculums of various courses should focus on 21st century skills. Skills like collaboration, critical thinking, effective communication, multitasking stress management, empathy are must for all the personals.

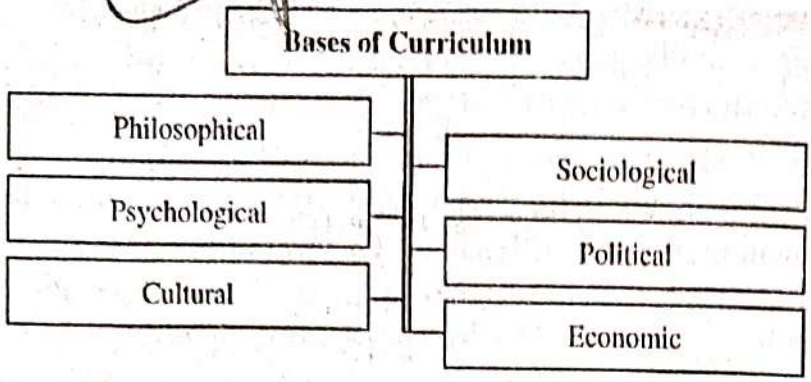
6) **International Understanding:** Globalisation has converted the world into global village. We should consider world as a one family and for this international understanding must be inculcate through curriculum.

7) **Constructivism:** Constructivist approach believes that learner should be given freedom to construct his/her knowledge. Spoon feeding must be avoided. If a learner is fully active in the construction of knowledge then learning process will be highly effective. In all the curriculums constructivist strategies must be given important place.

3.3. BASES OF CURRICULUM

Curriculum development is the process of assessing needs, formulating objectives and developing instructional opportunities and evaluation. It is the process of creating planned curriculum, pedagogy, instruction and presentations modes. Curriculum development is based on different foundational aspects. Curriculum foundation refers to basic forces that influences and shapes the minds of curriculum developers to decide what to include in the curriculum and how to structure it. There are certain forces that provide a background of information upon which the curriculum developers depend to make future decisions. These may include philosophical foundations which studies of nature and value, Psychological foundation are studies of learners and the learning theory and sociological and cultural foundation which are studies of life. These foundational aspects are:

1) **Philosophical:** This aspect is based on the philosophy of the nation. It aims at the all-round development of the individual. It reflects the ideals and aspirations of the people and inculcates the desired ideals of life in the students. It helps in the development of proper philosophy of life and enables the learners to learn the desirable cultural values, intellectual virtues, societal norms and moral doctrine. It helps in the development of the personal and national character.



2) **Sociological:** These aspects are based on the core values and needs of the Indian society and changing values of the people. It is based on the demands of the modern society and good family values and ways of living, democratic temper of the society, faiths, beliefs and the attitudes of the people, cooperation, media explosion, population explosion, regional and national imbalances and economic efficiency of the nation.

3) **Psychological:** Psychological foundation is an important part of philosophy. It is based on the interest of the learner, conditions facilitating optimum learning, and child-centred curriculum.

4) **Political:** A number of pressures exist – which under the curriculum development process happens – which may be categorised as political. Politics affect curriculum development in numerous ways.

5) **Cultural:** Cultural and social changes and expectations of the school can affect the implementation of the curriculum. However, this includes major changes to society such as unemployment patterns, societal values, economic growth and family relationships. Parental, employer and community expectations of schools. This is also affected by the educational system requirements and challenges. This includes systemic influences such as policy requirements, inquiry reports, external examinations, major curriculum projects and significant educational research.

6) **Economic:** It influences curriculum development. Curriculum developed for in house training in corporations focuses on educating employees for promotions that bring better returns in profits. Nations financing education expect an economic return from educated students contributing to the country's economy with global competition abilities in technical fields.

These foundations of curriculum development such as philosophical, psychological, sociological, and knowledge base impacting education in our past and present day educational system. Curriculum development is determined by various determinants such as:

1) Social-political-cultural-geographical-economic diversity,
2) Socio-political aspirations, including ideologies and educational vision,
3) Economic necessities,
4) Technological possibilities,
5) Cultural orientations,
6) National priorities,
7) System of governance and power relations, and
8) International contexts.

3.3.1. Philosophical Bases of Curriculum

Curricular decisions involve consideration of several topics and issues. Philosophy is considered one of the major foundational areas in curriculum development. There are different philosophies of education that influence curricular development decisions. Studying philosophy to develop curriculum helps us to deal with our own personal systems of beliefs and values, i.e., the way we perceive the world around us and how we define what is important to us.

As philosophical issues have always influenced society and institutions of learning, a study of the philosophy of education in terms of curriculum development is essential. In essence, a philosophy of education influences, and to a large extent determines, our educational decisions and alternatives. Those who are responsible for curricular decisions, therefore, should be clear about what they believe. If we are unclear or confused about our own beliefs, then our curricular plans are bound to be unclear and confusing. One important step in developing a personal philosophy of education is to understand the various alternatives that others have developed over the years. Following are the major philosophical schools that have, hitherto, influenced curriculum development:

1) Idealism,
2) Naturalism,
3) Realism,
4) Pragmatism, and
5) Humanism.

3.3.1.1. Idealism and Curriculum

The word idealism is derived from two distinct sources – the idea and the ideal. 'Idea' means true and testified knowledge. The word 'Ideal' stands for the perfected form of an idea or ideas. An idealist does not have considerations for material values of life. A thinker who idolises 'Mind and Self' is an idealist. Idealism is one of the oldest schools of philosophy.

According to Harold Titus, "Idealism asserts that reality consists of ideas, thoughts, mind or selves rather than materials, object and force."

According to D.N. Dutta, "Idealism holds that ultimate reality is spiritual."

Idealism is one of the oldest philosophical school of thought, which is originated in human nature. It has its own basic principles that ideas are the only true reality, the only thing worth knowing. In the search for **truth, beauty and goodness** that is enduring and everlasting; the focus is on conscious reasoning in the mind. **Plato** is called the father of Idealism. He stated this view about 400 years BC, in his famous book, **'The Republic'. Plato** believed that there are two worlds, i.e.:

1) The first is the **spiritual or mental world**, which is eternal, permanent, orderly, regular, and universal.

2) The second is the **world of appearance**, the world experienced through sight, touch, smell, taste, and sound, which is changing, imperfect, and disorderly.

Plato described a utopian society in which "education to body and soul all the beauty and perfection of which they are capable" as an ideal. In his allegory of the cave, the shadows of the sensory world must be overcome with the light of reason or universal truth. To understand truth, one must pursue knowledge and identify with the Absolute Mind. **Plato** also believed that the soul is fully formed prior to birth and is perfect and at one with the Universal Being. The birth process checks this perfection, so education requires bringing latent ideas to consciousness.

Idealistic Curriculum

Idealists give more importance to thoughts, feelings ideals and values than to the child and his activities. They firmly hold that curriculum should be concerned with the whole humanity and its experience. **According to idealism**, the teacher is the symbol or model of good character; he is the masters of all sort of knowledge. so the teacher has the central role in the teaching-learning process. The teacher has right to choose suitable content from the available literature and to teach. The student is a passive receptor, who has to gain the knowledge transferred by the knowledge. The teacher certifies the disciple at the successful completion of education as per the above given age levels.

1) **Views of Plato about Curriculum: According to Plato,** the aim of life is to realise God. Which is possible only by pursuing highest ideals namely **Truth, Beauty, and Goodness**. Three types of activities namely intellectual, aesthetic and moral can attain these high ideals.

2) **Views of Herbart about Curriculum: According to Herbart,** the idealistic aim of education is the promotion of moral values. He gave prime importance to subjects like Literature, History, Art, Music, and Poetry together with other humanities and secondary place to scientific subjects.

Methods of Teaching

Idealism is a traditional philosophy of education in which teacher has central role to play, he has to be role model so that the students will adopt his model to become good citizen. In idealism the lecture method is considered the most important one in which teacher delivers lecture and students listen to the teacher. Teacher selects any topic or issue for teaching, first he teaches the topic then asks the questions about that topic. Students answer the asked questions, Teacher provides the feedback and students improve themselves according to the teacher's feedback. This is teacher-centred approach therefore students do not participate in a well manner and do not understand the taught content.

This method of teaching is not suitable for young or elementary level of students because they are not habitual for listening long time. This method is only used for adults. Because their mind is mature and they can understand easily. The second method that suits idealism the most is the Socratic Method in which the teacher involves the students in learning activities. The teacher raises an issue and the students are encouraged to discuss it in a dialogue form and reach to a conclusion.

The following methods have been advocated by different idealists:

1) Learning through reading,
2) Learning through lecturing,
3) Learning through discussion,
4) Learning through imitation, and
5) Descartes employed the device of simple to complex.

→ is the belief that nothing exists beyond the natural world.

3.3.1.2. Naturalism and Curriculum

In philosophy, naturalism is considered as the "idea or belief that only natural laws (as opposed to supernatural or spiritual) and forces operate in the world". Naturalists assert that natural laws are the rules that govern the structure and behaviour of the natural universe, i.e., the changing universe at every stage is a product of these laws. Naturalism can intuitively be separated into an ontological and a methodological component. Naturalism is a philosophical view, but one according to which philosophy is not a distinct mode of inquiry with its own problems and its own special body of (possible) knowledge.

Naturalism is usually defined most briefly as the philosophical concept that the only reality is nature, as gradually discovered by our intelligence using the tools of experience, reason and science.

According to Naturalism, "Man's conscience is the voice of reason and the voice of nature."

According to Brais, "Naturalism is a system where salient feature is the exclusion of whatever is spiritual."

According to many naturalists, philosophy is a certain sort of reflective attention to the sciences and it is continuous with them. They maintain that this is so not only in the sense that philosophy's problems are motivated by the sciences, but also in that its methods are not fundamentally distinct.

Naturalism is viewed as:

1) **Romantic Naturalism:** These reforms rejected traditional conception of a child as a miniature adult. They protested the practice of coercive authoritarian methods. They embraced the notion of the child as a flower to unfold naturally. They emphasise that the school must be an environment in which the child's spontaneity, felt needs and activities effectively flourish in learning.
2) **Science and Sentiment:** Child study movement in education began as an effort to induce educational reform through the scientific study of the child, but it was dominated by sentiment. Their belief in centrality of child life in the curriculum led them to regard child interests and spontaneous activity indulgently as achievement, rather than as means towards intellective and social growth. But, **Dewey** admonished romantic progressivists for their failure.

3) **Humanistic Curriculum:** During 1960s as a reaction against subject-dominated cognitive learning, humanistic thinking was promoted. This can be seen from **Charles Silberman's** best-selling book **'Crisis in the Classroom'** where emphasis was laid on humanising American schools. It has complained that schools are training children with docility and conformity. He suggested the British infant school system at the elementary level and independent study, peer tutoring and community and work experiences at the secondary level. He believes the schools should be reformed.

Naturalistic Curriculum

According to naturalists, curriculum must be child centred considering the present and future needs of the child. Naturalists have divided curriculum under two stages:

1) **Early Stage:** In the early stage sensory training is given to the child. The child senses are properly exercised; the child develops physically and also develops the natural habits.

2) **Later Stage:** At the later stage the naturalists included in the curriculum subjects as physical sciences, language, mathematics, social studies, anatomy and other subjects. Manual work, trade, history aesthetics, physical culture, music and drawing are also included in the curriculum. Moral education also begin part of the curriculum is given through activities and occupations but not through lectures on ethics.

There are divergent views of naturalists on curriculum. These are:

1) **No Rigid Curriculum:** Naturalism does not advocate any rigid or fixed type of curriculum. Child learns best in a natural setting and nature is a grand book. Naturalistic curriculum is based upon the psychology of child and gives maximum importance to the age and stage of his development.

2) **Science:** Idealists lay emphasis on the study of humanities but naturalists believe in science subjects like physics, chemistry, zoology and botany. They also give due importance to mathematics and languages.

3) **Focal Point:** The focal point in the curriculum construction is that the textbooks and teaching should be oriented towards science and scientific point of view with simplicity and objectivity and with knowledge of relevant facts as the controlling aim.

Methods of Teaching

Naturalists follow a naturalistic philosophy of teaching. According to naturalists people learn more through direct experience that is by doing rather than by reading the books. **Rousseau** argued not to use any book in the childhood and boyhood stage. Another method is Heuristic method which means to find or to discover, the children are provided with situation and opportunities and the children search. Naturalists stress upon direct method of teaching. Teaching through things rather than words is given more importance. **Rousseau** emphasised two-way play method of teaching, learning by doing; during play also child learns a lot and is educated.

3.3.1.3. Realism and Curriculum

Aristotle is called the father of Realism. **Aristotle** believed that to understand an object, its ultimate form had to be understood, which does not change. Realism believes in the world as it is. It is based on the view that reality is what we observe. It believes that truth is what we sense and observe and that goodness is found in the order of the laws of nature. Modern realism is a broad term, encompassing several movements whose unity lies in a common rejection of philosophical Idealism. Realism asserts that objects in the external world exist independently of what is thought about them. Realists consider education a matter of reality rather than speculation. The paramount responsibility of the teacher, then, is to impart to learners the knowledge about the world they live in. What scholars of various disciplines have discovered about the world constitutes this knowledge.

According to Ross, "The doctrine of realism asserts that there is a real world of things behind and corresponding to the objects of our perception."

According to Butler, "Realism is the reinforcement of our common acceptance of this world as it appears to us."

Realists believe that reality exists independent of the human mind. The ultimate reality is the world of physical objects. The focus is on the body/objects. Truth is objective – what can be observed. **For example,** a rose exists whether or not a person is aware of it. A rose can exist in the mind without being physically present, but ultimately, the rose shares properties with all other roses and flowers (its form), although one rose may be red and another peach coloured. The exercise of rational thought is viewed as the ultimate purpose for humankind.

Realistic Curriculum

According to realism, curriculum should be many sided and it should be presented to the children a rounded view of the universe. Only those subjects should be included in the curriculum which are useful to the students and prepare them to meet the challenges of time in their actual life. Nature study, physical sciences and vocational training are given primary importance in the scheme of curriculum of realism. **Comenius** divided the educational period of the child into 4 stages and suggested curriculum and text books for each stage. He was of the opinion that all those things which are useful to the child in his life, the knowledge of such things must be given to the child. As the life being lived is real, he gave importance to mother tongue and vocational subjects to be successful in life. According to him mother-tongue is the foundation stone of the development of man and vocational training helps one to earn one's livelihood.

Methods of Teaching

Realism gives more emphasis to sense training. **Lominius** emphasised the importance of sense training in education. **Milton** emphasised the importance of travelling in education. **Locke** emphasised the importance of observation and experimentation. **Inductive–Deductive method** is also advocated by them. 'Things rather than the words' or 'First objects and then their exposition' are their watch words. Education should be given through co-curricular activities.

3.3.1.4. Pragmatism (Experientialism) and Curriculum

Pragmatism in Education was created by **John Dewey**. He applied pragmatist philosophy in his progressive approaches. He believed that learners must adapt to each other and to their environment. Schools should emphasise the subject matter of social experience. All learning is dependent on the context of place, time, and circumstance. Different cultural and ethnic groups learn to work cooperatively and contribute to a democratic society. The ultimate purpose is the creation of a new social order. Character development is based on making group decisions in the light of consequences.

According to James B. Pratt, "Pragmatism offers us a theory of meaning, a theory of truth, of knowledge and a theory of reality."

According to Reid, "Pragmatism makes activity, engagement, commitment and encounters its central theme."

Pragmatists believed that only those things which are experienced or observed are real. In 19th century American philosophy focuses on the reality of experience. Unlike the Realists and Rationalists, Pragmatists believe that reality is constantly changing and that we learn best through applying our experiences and thoughts to problems, as they arise. The universe is dynamic and evolving, a "becoming" view of the world. There is no absolute and unchanging truth, but rather, truth is what works.

Pragmatist Curriculum

According to Dewey, experience is the content of education. Ideas formed by previous generations are vital for human survival, and it is the task of education to transmit this knowledge to the younger generations. This, however, should not be done as it was being done traditionally. Traditional education never relates ideas and experience, and due to this reason, children cannot understand the taught lessons. **Dewey** says that ideas should be taught as experience. Children should learn to derive ideas from their experiences.

In the field of curriculum development, the following principles have been prescribed by pragmatists:

1) **Principle of Utility:** According to this principle, only those subjects, activities and experiences should be included in the curriculum which are useful to the present needs of the child and also meet the future expectations of adult life as well. As such Language, Physical well-being, Physical training, Geography, History, Science, Agriculture and Home science for girls should be included in the curriculum.
2) **Principle of Interest:** According to this principle, only those activities and experiences where in the child takes interest should be included in the curriculum. **According to John Dewey** these interests are of four varieties, namely, interest in conversation, interest in investigation, interest in construction and interest in creative expression. Keeping these varieties of interests in view, at the primary stage, the curriculum should include Reading, Writing, Counting, Art, Craft-work, Natural science and other practical work of simple nature.

3) **Principle of Experience:** The third principle of pragmatic curriculum is the child's activity, vocation and experience. All these three should be closely integrated. The curriculum should consist of such varieties of learning experiences which promote original thinking and freedom to develop social and purposeful attitudes.

4) **Principle of Integration:** Pragmatic curriculum deals with the integration of subjects and activities. According to pragmatism knowledge is one unit. Pragmatists want to construct flexible, dynamic and integrated curriculum which aids the developing child and the changing society more and more as the needs, demands and situation require.

Methods of Teaching

The whole emphasis of method of teaching in pragmatism is on child, not the book, or the teacher or the subject. The dominant interest of the child is "to do and to make". The method should be flexible and dynamic. It must be adaptable and modifiable to suit the nature of the subject matter and potentiality of the students. The pragmatist's curriculum provides for creative and purposeful activities in the teaching-learning process. Pragmatists regard school as 'a miniature of society' where child gets real experiences to act and behave according to his interests, aptitudes and capacities.

Project method is a contribution of pragmatist philosophy in education. **Dewey** advocates problem solving method. Through this method a child learns by his own activities and experiences. The teacher develops a problematic experience for learners. Learners perform an activity, and in the course of that activity, a problem is introduced. And then learners are asked to find solutions to that problem. In the course of solving that problem, children learn.

3.3.1.5. Humanism and Curriculum

Humanism is a school of thought that believes human beings are different from other species and possess capacities not found in animals. Humanists, therefore, give primacy to the study of human needs and interests. A central assumption is that human beings behave out of intentionality and values. This is in contrast to the beliefs of operant conditioning theorists who believe that all behaviours are the result of the application of consequences or to the beliefs of cognitive psychologists who hold that the discovery of concepts or processing of information is a primary factor in human learning.

According to Encyclopaedia, 'Humanism is the attitude of mind which attaches primary importance to man and his faculties, affairs, temporal, aspirations well-being.'

According to Baldwin and James Mark, Humanism is, "any system of thoughts, belief or action, which centres about human or fundamental things to the exclusion of divine."

Humanists also believe that it is necessary to study the person as a whole, especially as an individual grows and develops over the lifespan. The study of the self, motivation, and goal-setting are also areas of special interest.

Humanistic Curriculum

The curriculum followed in schools inculcates human values into students. In order to cater to the individual and social needs of individuals, the curriculum should not be made rigid. Only a flexible curriculum can enable optimised individual growth and fulfil the vivid tastes, preferences, requirements, capabilities and talents. A curriculum must not remain just in theories and should be executable in order to make students learn how to "Live Humanism". It should be designed in such a way that it can be debated in the form of issues and problems.

Methods of Teaching

Humanism emphasises learning by doing. The cluster methods like group discussion, project-method, problem-solving, etc. and traditional teaching methods of Vedas such as **Manana, Sravana, Nidhidhyasan,** etc., are promoted in humanism. Humanism is practiced and tested in schools like a laboratory. There are no stringent instructions required in humanism. Rather, the students are stimulated to take initiatives. The above mentioned methods aim at making the children rational and encourage them to be more humanistic in their approach by discussing the most crucial issues of human life.

3.3.2. Sociological Bases of Curriculum

Society has its own expectations about the aims and objectives that should be considered when designing the curriculum. It also has a perception of what the product of the school system should look like. It is therefore necessary for curriculum designers to take into account these societal forces.

Society's knowledge and culture plays a crucial role in determining what students know, what they bring to that society when they leave school, and – most critically – how committed they feel towards it. Of course, there are many ways in which social theorists have conceptualised the social determinants of curricula. Nevertheless, in the fifteen or so years there has arisen general agreement that the curriculum is not determined in any general sense; that is, there is no necessary shape to the curriculum (mathematical or otherwise) which arises from particular interests, societal needs or the balance of social forces. On the other hand, it seems worthwhile to try to make sense of the relationship between the mathematics curriculum and the social, cultural and demographic trends in society. Some **areas of social forces** are:

1) Social goals,
2) Conceptions of culture,
3) The tension between cultural uniformity and diversity,
4) Social pressures,
5) Social change, and
6) Future planning.

While developing a curriculum, following social forces should be taken into consideration:

1) **Increasing Ethnic and Cultural Diversity:** An educator should emphasise and preserve and share increasing ethnic and cultural diversity, as the population of schools continues to be more and more diverse.

2) **Environment:** Curriculum should address important environmental issues such as pollution and over-population to raise awareness and prevent further damage.

3) **Changing Values and Morality:** There has been an inconsistent cycle of frugality *versus* over-consumption and elders passing on values to the next generations seem somewhat lost. Increasing drug and alcohol abuse as well as high divorce rate are evident everywhere. Students admitted to indulging in a much higher level of cheating on tests or increasingly growing number of cases of stealing from a store. Teachers can help ameliorate this by implementing character education (Kohlberg, equity/justice/caring/empathy) but some parents and teachers oppose this, thinking it best that values and morality be left to the home sphere.

4) **Family:** Family dynamic is changing now more than ever – single-parent families, grand-parents as guardians, same-sex parents, and step-parent families are more common than ever. Families are not as closely-knit as before, not closely tied to community, mothers are working more. Family can be spread over a large geographical area. The roles of mothers, fathers, and families overall have changed.

5) **Technological Revolution:** Technology is more important now than ever and ever-changing, with a vast array of available educational aids. Computers, software, programmes, and other technologies have changed the way people learn – as well as the time and place. Computer literacy should be included and students who are not familiar with technologies available should be exposed in a structured and non-threatening way.

6) **Changing Working Conditions:** The boom in technology has greatly changed the job market and will continue to do so, again reinforcing the importance of technological education for all students. Teachers should encourage and enable students to become self-directed life-long learners.

7) **Equal Rights:** Women and minority groups have had success in seeking equal rights and creating more equality. However, with N.C.L.B. there is again more inequality because of the uniform standards applied globally. Students with learning difficulties or language barriers are getting left behind, and some students with no handicaps are being placed in special education classes. Schools try to promote social change and equal opportunity for all, but somehow end up often furthering the existing problems.

8) **Crime and Violence:** There is much more school vandalism, more violence including armed robberies, burglaries, aggravated assaults, and rapes at schools. Violence and gangs create unsafe neighbourhoods, and the issues in school are ever-more complicated with too many instances of school shootings.

9) **Lack of Purpose and Meaning:** Changes in family dynamics, rampant corruption and violence, poverty, fluctuation in economy, rapid changes in technology increasing disparities, crime, the lack of adult guidance, and injustice leave many students feeling a lack of purpose or meaning. Resulting

in concerns include – depression, eating disorders, violent and criminal behaviour, alcohol and drug abuse, academic failure or drop-outs, suicides, and teenage pregnancies and STDs.

10) **Global Interdependence:** International relations are extremely important and continue to be more and more so; educators must help students, understand others cultures and values, economics, and way of life so they can participate in a global community.

3.3.3. Psychological Bases of Curriculum

Psychology provides basis for the teaching and learning process. It unifies elements of the learning process and some of the questions which can be addressed by psychological foundations. By providing a basis for understanding the teaching/learning process, educational psychology deals with how people learn. By implication, it emphasises the need to recognise diversity among learners. However, it is also true that people share certain common characteristics. Among these are basic psychological needs which are necessary for individuals to lead a full and happy life.

The following are the three major groups of learning theories:

1) Behaviourist theories,
2) Cognitive theories, and
3) Humanistic theories.

3.3.3.1. Behaviourists Theories

Behaviourist theories deal with various aspects of stimulus-response and reinforcement scheme. These theories consider that learning should be organised in order that students can experience success in the process of mastering the subject matter, and thus, method of teaching should be introduced in a step-by-step manner with proper sequencing of task.

Behaviourism and Curriculum

The behaviourist school, which represents traditional psychology, is rooted in a corresponding philosophical speculation about the nature of learning. It has particularly dominated psychology in the first half of the 20th century. After a few decades of being in the wilderness, it has recently gained currency once again with the advent of individualised education. Essentially, learning is considered a habit-formation and teaching is regarded as arranging learning experiences in such a way as to promote desirable behaviour. Further, behaviourism maintains that what is learnt in one situation can be transferred to other situations as well.

Broadly, behaviourists advocate that behaviour is likely to be influenced by the conditions under which learning takes place; attitudes to and abilities of learning can change or improve over time through the application of proper stimuli; learning experiences can be designed and controlled to create desired learning; selective reinforcement is essential; and rote learning and memorisation of knowledge are unnecessary.

Behaviourism has contributed to curriculum development. It provides the following significant guidelines. A curriculum, according to behaviourists should be based on the following concerns:

1) Remedial measures, acquisition of skills, considerations of basic or advanced learning,
2) Well-defined, short-term and long-term objectives,
3) Appropriate instructional materials and media to suit the learner's abilities,
4) Shaping behaviour through prescribed tasks, phase-by-phase activities, close supervision of activities and positive reinforcement; and the field of Curriculum,
5) Diagnosing, assessing and reassessing the learners' needs, objectives, activities, tasks and instruction with a view to improving the curriculum.

We can observe manifestations of these guidelines in the theories, principles or trends related to individualised education (and to some extent, open system of education), instructional design and systems, teacher-training techniques such as simulation teaching, microteaching, competency-performance based teacher education; educational technology including programmed instruction (which provides, with modifications, a base for self- instructional materials use in the distance mode of teaching/learning).

3.3.3.2. Cognitive Theories

Cognitive theories view the learner in relationship with the total environment. Cognitive psychology focus their attention on how individuals process information and how the monitor and manage thinking. For the cognitive theorists, learning constitutes a logical method for organising and interpreting learning. Learning is rooted in the tradition of subject matter where teachers use a lot of problem and thinking skills in teaching learning. These are exemplified by practices like reflective thinking, creative thinking, intuitive thinking, discovery learning, etc.

Cognitivism and Curriculum

Today most psychologists explain the phenomenon of human growth and development in cognitive, social, psychological and physical terms. They also note that learning is primarily cognitive in nature. Growth and development refer to changes in the structure and function of human characteristics. Most cognitivists believe that growth and development occur in progressive stages. One example is Piaget's description of cognitive development in terms of stages from birth to maturity. Most curriculum specialists tend to show greater adherence to cognitivism than to behaviourism. This might be because the cognitive approach leads to logical methods for organising and interpreting learning, and the cognitive approach is rooted in the tradition of teaching based on subject matter.

Even contemporary behaviourists incorporate cognitive processes in their theories of learning. Because learning in schools/colleges emphasises the cognitive domain, it follows that most educationists feel that learning is synonymous with cognitive development. As a corollary, a problem solving approach in teaching-learning gains momentum.

But, if we take an actual teaching/learning situation into consideration we tend to realise that this learning model is incomplete and that something is lost in its processes of actual transfer in the classroom. In reality, the teaching/learning process boils down to the teacher talking predominantly and students mostly responding to what is said by the teacher. What should be of concern to the curriculum specialists? They should be aware of the fact that a school/college should be a place where students are not afraid of asking questions, making mistakes, taking cognitive risks and playing with ideas. Further, colleges/schools should be more humane places where students can explore and fulfil their human potentials. Obviously, curriculum has to play a vital role to actually realise this objective.

3.3.3.3. Humanistic Theories and Phenomenology

Phenomenology emphasises the affective domain of learning. Humanistic psychology is concerned with how learners can develop their human potential. Based on Gestalt psychology where learning can be explained in terms of the wholeness of the problem and where the environment is changing and the learner is continuously reorganising his/her perceptions. Curriculum is concerned with the process not the products, personal needs not subject matter; psychological meaning and environmental situations.

Phenomenology and Curriculum

Phenomenologist point out that the way we look at ourselves is crucial for understanding our behaviour and that we respond to an organisation or pattern of stimuli and not to an isolated stimulus. It emphasises that learning must be explained in terms of the "wholeness" of the problem. Here you can draw a parallel with cognitivism. But what differentiates phenomenology from cognitivism is that the former stresses the affective and the latter the cognitive aspects of learning. Because each individual has specific needs and interests related to his or her self-fulfilment and self-realisations, there cannot be a generally prescribed humanistic curriculum.

Humanistic learning may enhance the mental health of the learners, harmonise personal feelings among students and teachers, and improve various aspects of human awareness among students, teachers, and curriculum specialists, yet its processes rely mainly on personal experiences and subjective interpretations that leave them open to criticism. Therefore, there is a great need to examine and understand what is relevant in humanistic curricula.

It is noted that most textbook writers tend to be cognition-oriented. However, one should propose that behaviourist components are needed for planning and developing a sound curriculum. Further, humanistic components of teaching and learning must also be incorporated into the curriculum.

Basic Human Needs and Curriculum

Physical well-being and health are generally recognised and frequently dealt with through various programmes such as those on fitness, nutrition and health problems. Mental health needs such as those pertaining to acceptance, belonging,

security and status have been widely studied but little emphasised in the area of curriculum. In this sub-section, we shall touch upon just two points which concern the topic under consideration:

1) **Self-Actualisation:** The notion of self-actualisation characterises individuals' need for self- fulfilment in life by actualizing/achieving their own potential. A curriculum should therefore provide learning activities that allow students to identify themselves with those things they can do well. It should also assist them to succeed in other activities that are difficult for them. Learners are thus helped to find personal meaning in the learning experience. Those responsible for curriculum development must pay attention to the concept of self-actualisation. We all recognise the importance of school/college and community based goals for learners. Self- actualisation on the other hand includes satisfying the desire to know and understand in relation to personal needs and interest. Moreover it has been noticed that when personal purposes are ignored, learners seem to be less successful in meeting the set goals. If curricular plans reflect a balance between institutional and personal needs, the impact on both may be substantially enhanced.

2) **Developmental Tasks:** We can define a developmental task as a task which arises in relation to a certain period in the life of an individual, success which leads to his/her happiness and to success in later tasks, while failure in it leads to unhappiness in the individual and difficulties in subsequent tasks. This fact is regarded as one of the most specific considerations in organizing tasks. The needs of individuals are governed by the stage of development and age they have reached, and also grow out of their need to respond to societal expectations. The implication is that educators/curriculum planners should understand behaviours manifested by a learner indicating her/his readiness and need to deal with a particular developmental task.

As we facilitate the learners' success in these need tasks, their overall success can be ensured. Further, in developing a curriculum, the development of an environment in which learners feel genuinely secure should be ensured. When a curriculum develops such an environment, learning takes place smoothly because the needs of students and what has been provided by the curriculum are complementary to each other. In our discussion of the psychological foundations, we dealt with the contribution made by learning theories towards curriculum and also tried to see how much more effectively a curriculum may be framed if we consider the nature of basic human need while forming it.

3.3.4. Political Bases of Curriculum

Political factors affect curriculum development in many ways. How political factors influence curriculum design and developments, it starts with funding.

1) **Funding:** Both private and public educational institutions rely on funding for hiring personnel, building and maintaining facilities and equipment.

2) **Political Standards:** All aspects of curriculum depend on local, state and national political standards. Politics affects the curriculum development from defining goals, interpreting curricular materials to approving examination systems.

3) **Exercise of Control:** A large number of pressures exist which influence the curriculum development process which may be defined as the exercise of control by an individual or groups who want to improve their position in an educational institution.

4) **Need to Improve Professional Standard:** One of the most powerful forces which drive a teacher to reassess the curriculum is the need to improve his professional standard in the eyes of colleagues. If majority feel the same then a bandwagon is launched. Each year more schools become involved and a formal standing committee has now been established with two coordinators to link local developments with regional and national headquarters.

5) **Personal Self-Interest:** It is a crucial factor at the present time of falling roles when school closures and amalgamations force teachers into reapplying for a diminishing number of jobs. It need hardly be said that there is a heavy investment of time and energy in the production of resources by individuals. Any private reservation about their suitability is submerged by the reality of producing alternatives oneself. This is an illustration of the tyranny of the textbook syndrome in operation.

3.3.5. Cultural Bases of Curriculum

Culture is an important determinant of curriculum. The word culture was very first time used by the pioneer English anthropologist **Edward B. Tylor** in his book, **'Primitive Culture'**, published in 1871. **Tylor** described that culture is "that complex whole which includes knowledge, belief, art, law, morals, custom, and any other capabilities and habits acquired by man as a member of society".

Culture is the totality of one's customs, norms, values, beliefs, techniques and practices that characterise social living. The beliefs, values, norms held by and propagated by a society are instrumental in deciding the different aspects of the curriculum. Thus, every society tries to preserve and transmit its culture and education is a potent tool in this regard. Therefore, curriculum is a very significant force in deciding the experiences that are to be included in the curriculum. To define culture is a very difficult task.

According to Duranti (1997), "culture is such a complex notion that it may be neither possible nor desirable to arrive at an all-encompassing definition of it. It means different to different people. For some, it refers to an appreciation of good literature, music, art, and food. However, for anthropologists and other behavioural scientists, culture is the full range of learned human behaviour patterns."

Curriculum development in the schools is greatly influenced by the culture in which the school operates. It is a process and a flow from theory to practice and the feed of curriculum stands on the trench hold of becoming ordered. Therefore, the fundamental aspects of culture as it influences curriculum in the school system, include belief, values, routines and customs. The elements of culture whether materials or non-materials can be taught and learnt only through interaction as members of a group.

Aspects/Elements of Culture in Curriculum Development

The fundamental aspects of culture include beliefs, values, routines and customs. These are briefly mentioned below:

1) **Beliefs:** Every culture has some beliefs which are accepted as true. These beliefs are sometimes called superstitious beliefs because of lack of empirical knowledge or lack of scientific proof. These beliefs are valued and so are accepted by majority of people in the community. These beliefs are accepted by majority of the people in these societies or communities but the basis of commitment on these beliefs varies from individual to individual. There are some beliefs which are accepted by individuals irrespective of the general beliefs of the community. Such beliefs that are accepted by individuals are referred to as private beliefs as against the general beliefs which are regarded as declared beliefs held by a majority of the people in the community.

2) **Values:** These are those aspects of cultural practices, actions or objects that are valued in high esteem in the society. The values of a society are also those aspects of the culture that society wants to preserve because their traditionally valued and they want to pass it from generation to generation. The values of the society are the aspect of the culture, which is needed in the society. These aspects of the culture that are valued should be passed from generation to generation so as to maintain a particular valid aspect of the culture. **For example,** every society expects adults to get married for procreation to keep the society moving. An individual in the society may complain of inability to pay his children's school fees but will have money for marrying another wife to have more children or would provide money for the father's funeral. Values and judgements are not only important elements of culture but they are also relevant to modern society.

3) **Routines and Customs:** These are also very important aspects of culture. **Ezewu** (1983) explained that three concept are interrelated – recipes, routines and customs. Recipes are the ideas and the understanding about how things should be done as prescribed by the culture in question. **For example,** different societies have different ways prescribed by their culture in performing naming, funeral, marriage ceremonies and so on. Routines and customs refer to the actual doings and the regularities of those cultural actions or elements. Customs serve as recipes and routines to which people regularly resort for recurring purposes.

4) **Religious and Spiritual Variables:** Most teachers realize that studying about different religious practices can be a beneficial and stimulating project that will enhance a multicultural classroom. In elementary schools, religious dogma must remain outside any curriculum. As different religious groups become more visible and expand their influence in public education, questions about religious beliefs and principles are likely to receive more study and adjudication.

Thus, the culture is maintained or modified through education by way of curriculum development. This is because when educational institutions

discharge their duties well; they influence the total life of the society. This is the society's culture; and curriculum is a reflection of what people are in the society, feel, believe and do. What people feel, believe and do is their culture. Also, it is believed that curriculum is an inevitable aspect of education.

Therefore, there is no way in which culture can exist without some curriculum, particularly in formal setting in education. It seems obvious that curriculum must have a firm basis on culture. Indeed, culture is the substance of education.

Culture is to education what current is to electricity. Any society whose education is not based on its culture is in danger of being uprooted and estranged by the social institution on which it should depend for its survival. The social institution is the school. In discharging its duties, the school (including all categories of educational institutions) must pay special attention to the different classes of culture; and educators themselves must be familiar with how culture is classified. In effect, cultural traits were understood as representing one of a series of stages of mental and moral progress culminating in the rational society.

3.3.6. Economic Bases of Curriculum Development

Economics influences curriculum development. Curriculum developed for in house training in corporations focuses on educating employees for promotions that bring better returns in profits. Nations financing education expect an economic return from educated students contributing to the country's economy with global competition abilities in technical fields. **For example,** nations financing education expect an economic return from educated students contributing to the country's economy with global competition abilities in technical fields.

Curriculum development is money consuming especially if it is to be done at the national level. The inputs of the experts both at the national and international levels and other different groups of people and associations are to be sought for. To get the curriculum document itself tested and evaluated to carry out some other necessary activities, will certainly require a huge expense. It should also be stressed that the kind of economic policy a country wishes to have in operation may also be a factor in influencing curriculum development.

1) Economic Analysis of Education Interventions,
2) Finance and Expenditures in Education,
3) Public-Private Partnerships in Education,
4) School-Based Management,
5) Impact Evaluation, and
6) Quality of Education.

3.4. DIFFERENT APPROACHES TO CURRICULUM THEORY

3.4.1. Curriculum Approach

Curriculum Theory (CT) is an academic discipline devoted to examining and shaping educational curricula. There are many interpretations of Curriculum theory, being as narrow as the dynamics of the learning process of one child in a classroom to the lifelong learning path an individual takes. Curriculum theory can be approached from the educational, philosophical, psychological and sociological disciplines.

According to James MacDonald, "one central concern of theorists is identifying the fundamental unit of curriculum with which to build conceptual systems. Either this is rational decisions, action processes, language patterns, or any other potential unit has not been agreed upon by the theorists." Curriculum theory is fundamentally concerned with values, the historical analysis of curriculum, ways of viewing current educational curriculum and policy decisions, and theorising about the curricula of the future. **Pinar** defines the contemporary field of curriculum theory as "the effort to understand curriculum as symbolic representation".

An approach is a way of dealing with something, a way of doing or thinking about something. A Curriculum Approach is a way of dealing with a curriculum, a way of doing/creating/designing/ thinking about a curriculum.

There are many approaches to curriculum development. They differ by the various perspectives curriculum developers construct regarding the key curricular elements, i.e., curriculum, teachers, students and the context. Some curriculum developers focus on students and their learning goals where others focus on the effect of the teacher's action upon learning. Still others focus on the context of learning and the degree to which individuals are viewed autonomously or as the objects upon which the work of curriculum is acted. There are mainly three types of curriculum approaches:

1) Traditional approach,
2) Learner-driven approach, and
3) Critical approach.

Curriculum practitioners and implementers may use one or more approaches in planning, implementing, and evaluating the curriculum. Textbook writers or instructional material producers also have different curricular approaches.

3.4.2. Traditional Approach

We can identify several different traditional approaches to curriculum development. The most common approach until recently is the content approach.

1) **Content Approach:** This approach is used where the curriculum is basically a list of knowledge things that the learners need to know. Usually this list is

made either by the trainer, or by subject-matter specialists, or by a curriculum committee or group. The content approach usually results in a curriculum, which is very theoretical, academic, and based on disciplines (e.g., soils, plant physiology, forest inventory, soil-water interactions etc.). In this approach, the trainer receives little or no guidance on how to facilitate the learning process.

2) **Product Approach:** Another commonly used approach is the product approach. In this case, the focus is on what the learners will be able to do (and the knowledge and skills they require) after the course has finished. This approach usually follows a systematic planning procedure, and assumes that there are common goals for the learners, with the provision of adequate expertise, resources and technology. Setting objectives is a very important part of this approach. Needs identification is strongly linked to an analysis of a job or sets of tasks that should be carried out.

3) **Process Approach:** It is characterised by the recognition of individual perception and behaviour, and the variations in the social contexts of different groups of learners. It adopts a less structured procedure, and is based upon an appreciation that understanding and knowledge depend on a process of constantly shifting interactions between individuals, and between them and their environments. The content and product approaches are more closed, uniform, predictable and safe. The process approach results in a more open, varied, unpredictable and risky curriculum. Specific objectives are often not used, although there may be an attempt to identify overall learning outcomes. These are more likely to be set on an individual basis rather than for all the learners. With a process approach, the curriculum development itself becomes an intervention, which may have an impact upon individuals as well as on organisations and institutions.

3.4.3. Learner-Centred Approach

A learner-centred approach is a teaching and learning approach based on a constructivist theory of learning, which advocates the inclusion of learner experiences in teaching and learning. In a learner-centred approach, teachers involve learners in the learning process. The constructivist model of learning is based on the assumption that knowledge and understanding are constructed within a social context and learning occurs when deep understanding and support is observed. Constructivism addresses learning processes, as well as learning outcomes, and considers that learners may have the same opportunity to learn.

Contrary to the traditional curriculum, the learner-centred curriculum is based on the fact that in the learning process, learners contribute their experiences from their own environment. These experiences are used to acquire new concepts in the classroom. Those experiences may be the subject of analysis by the teacher during the teaching and learning process. Assessment in this type of curriculum is meant to develop students' higher order thinking.

The learner-centred curriculum defines a framework to guide the design, and delivery of curriculum, the infrastructure that supports it, and services that makes it work. There are various interrelated components which shape the learner-centred curriculum. In simple form these components are given below:

1) Learner populations served,
2) Objectives they seek,
3) Provider models available,
4) Learning theory, methods and principles appropriate to successful learning,
5) Overall curriculum architecture providing the full scope of programmes and approaches,
6) Specific curriculum configurations designed to meet specific learners' needs, and
7) Services required by learners to meet their objectives.

These integrated components of learner-centred curriculum provide the structure for dialogue around academic master planning, curriculum design and evaluation, programme review, accreditation self-study, technology planning, and institutional strategic planning.

This approach to curriculum design is based on the underlying philosophy that the child is the centre of the educational process. It means that the curriculum is constructed based on the needs, interest, purposes and abilities of the learners. The curriculum is also built upon the learner's knowledge, skills, learning and potentials.

3.4.4. Critical Approach

Social re-constructionism is a philosophy that emphasises the addressing of social questions and a quest to create a better society and worldwide democracy. Re-constructionist educators focus on a curriculum that highlights social reform as the aim of education. **Theodore Brameld (1904-1987)** was the founder of social re-constructionism, in reaction against the realities of World War II. He recognised the potential for either human annihilation through technology and human cruelty or the capacity to create a beneficent society using technology and human compassion. **George Counts (1889-1974)** recognised that education was the means of preparing people for creating this new social order.

Critical theorists, like social re-constructionists, believe that systems must be changed to overcome oppression and improve human conditions. **Paulo Freire (1921-1997)** was a Brazilian whose experiences living in poverty led him to champion education and literacy as the vehicle for social change. In his view, humans must learn to resist oppression and not become its victims, nor oppress others. To do so requires dialogue and critical consciousness, the development of awareness to overcome domination and oppression. Rather than "teaching as banking," in which the educator deposits information into students' heads, **Freire** saw teaching and learning as a process of inquiry in which the child must invent and re-invent the world.

For social re-constructionists and critical theorists, curriculum focuses on student experience and taking social action on real problems, such as violence, hunger, international terrorism, inflation, and inequality. Strategies for dealing with controversial issues (particularly in social studies and literature), inquiry, dialogue, and multiple perspectives are the main areas of focus. Community-based learning and bringing the world into the classroom are also strategies.

3.4.5. Comparative Study of Traditional Approach, Learner-Driven Approach and Critical Approach

Following table provides a brief description of these approaches:

Table 3.1: Comparison between Traditional Approach, Learner-Driven Approach and Critical Approach

Bases of Differences	Traditional Approach	Learner-Driven Approach	Critical Approach
Determinants of Curriculum	Curriculum developer (publisher, state, institution) sets goals and chooses learning experiences, evaluates, plans and proposes curriculum.	1) Students articulate learning goals that spring from their real-world roles. 2) Students help plan curriculum.	1) Teacher leads the class while following the lead of learners. 2) Students, rather than outsiders, become experts.
Knowledge	1) Appears neutral and equitable in its availability. 2) Exists 'out there', can be organised and transmitted. 3) Is observable and measurable.	1) Created through the interaction of student and text. 2) Builds on what learners already know. 3) Relevant to students' real-life context.	1) Not fixed - dependent upon interaction among students, text, and teacher. 2) Autobiographic - depends on the politics of identity brought to learning. 3) Complex interaction between text, the teacher, and what is taught. 4) Knowledge is created, rather than taken in.
Assumptions	1) Pre-determined goals. 2) Learning happens in a linear, step-by-step fashion. 3) Expert knowledge is important.	1) Learning happens in social contexts. 2) Instruction is transparent and based on purposes students determine.	1) Education is political. 2) Language and power are connected.

		3) Learners actively build on knowledge and experience.	
Action	1) A classroom with lesson plans, homework, grades possibly. 2) Skills-based/sequenced textbooks or workbook with pre-determined learning goals.	1) Apolitical on the surface. 2) Drawn from adults' lives in their everyday contexts.	1) Abandons technician mentality. 2) Addresses social and community issues of importance 3) Curriculum not set in advance; emerges from 'action and interaction of the participants'.
Assessment of Learning	1) Objective, observable scientific means. 2) Can provide comparative scores.	1) Performance of the student's contextualised goal. 2) Continuing, involving metacognitive strategies.	1) Portfolios, self-assessment instruments. 2) Measures of social and personal change 3) Levels of critical consciousness reached. 4) External performance levels do not apply.

3.5. CURRICULUM PROCESS AND DIFFERENT WAYS OF APPROACHING CURRICULUM THEORY

3.5.1. Curriculum Development Process

Curriculum processes is a collective term that encompasses all of the considerations about which curriculum workers ponder and ultimately use to make choices in the development and evaluation of a curriculum project. These processes involve changes that some students, teachers, school staff, and community members welcome, but that others resist either actively or passively.

While developing new curriculum the following steps have to be followed:

1) **Analysis of Situation:** Some important facts and figures must be established first before developing the curriculum. This is done through baseline surveys/or Needs Assessment. Without a Situational Analysis we cannot develop a good and realistic curriculum. Situational Analysis involves:
   i) Identifying tasks and problems and seeking possible solutions,

ii) Identifying difficulties and possible areas of resistance,
iii) Clues to planning for the resources and the organisational changes that will be required.

2) **Formulating Objectives:** Curriculum objectives of any programme, institution or education system constitute the behaviours which the learners have to show or exhibit if the aim of the course is attained e.g. what skills they should possess, what knowledge and insights they should have, what attitudes and values they should develop. Objectives are derived from analysis of the situation. They have to reflect:
i) The needs of the society,
ii) The needs of the teacher, instructor, and
iii) The needs of the learner/ user.

3) **Selection of Content:** Curriculum content is a body of facts, ideas, concepts and skills that are presented, discussed and involved in the course. The content selected should reflect the pre determined curriculum objectives and experiences needed by the learner. While selecting the contents the curriculum designer should give attention that the knowledge to be selected must be of established value to participants and the society they are going to serve after learning and they should meet the needs and interests of the learners. What society has achieved, its institutions, aspirations, traditions, beliefs, etc., should guide selection of content. This is because some of these will themselves form the content of courses. Due to the ever-changing society, both local and international, it is needed to select from the abundance of generated knowledge and skills. There is need to remain current by replacing content that may be outdated, there is need to ensure quality as well as quantity, i.e., how much to cover on a particular course.

4) **Evaluation and Assessment:** In order to measure the success of curriculum there should be continuous assessment throughout the course as well as final examination at the end of the course.

3.5.2. Ways of Approaching Curriculum Theory

There are following ways of approaching curriculum theory and practice:
1) Curriculum as a body of knowledge to be transmitted.
2) Curriculum as an attempt to achieve certain ends in students (Curriculum as a product).
3) Curriculum as process.
4) Curriculum as praxis.

It is helpful to consider these ways of approaching curriculum theory and practice in the light of **Aristotle's** influential categorisation of knowledge into three disciplines: the theoretical, the productive and the practical.

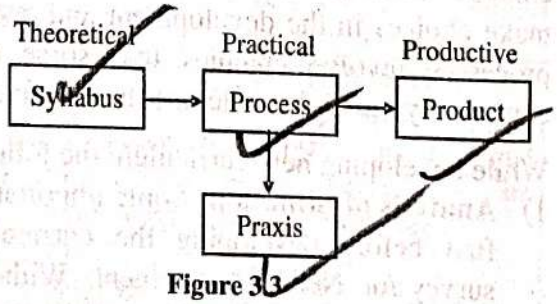


Figure 3.3

3.5.2.1. Curriculum as a Syllabus to be Transmitted

Many people still equate a curriculum with a syllabus. Syllabus, naturally, originates from the Greek language (although there was some confusion in its usage due to early misprints). Basically it means a concise statement or table of the heads of a discourse, the contents of a treatise, the subjects of a series of lectures. In the form that many of us will have been familiar with it is connected with courses leading to examinations. A syllabus will not generally indicate the relative importance of its topics or the order in which they are to be studied. In some cases as **Curzon** (1985) points out, those who compile a syllabus tend to follow the traditional textbook approach of an 'order of contents', or a pattern prescribed by a 'logical' approach to the subject, or – consciously or unconsciously – a shape of a university course in which they may have participated.

Thus, an approach to curriculum theory and practice which focuses on syllabus is only really concerned with content. Curriculum is a body of knowledge-content and/or subjects. Education in this sense is the process by which these are transmitted or 'delivered' to students by the most effective methods that can be devised. Where people still equate curriculum with a syllabus they are likely to limit their planning to a consideration of the content or the body of knowledge that they wish to transmit. 'It is also because this view of curriculum has been adopted that many teachers in primary schools', **Kelly** claims, 'have regarded issues of curriculum as of no concern to them, since they have not regarded their task as being to transmit bodies of knowledge in this manner'.

3.5.2.2. Curriculum as Product

It is the work of two American writers **Franklin Bobbitt** (1918; 1928) and **Ralph W. Tyler** (1949) that dominated theory and practice within this tradition. In The Curriculum, **Bobbitt** writes as follows:

> The central theory [of curriculum] is simple. Human life, however varied, consists in the performance of specific activities. Education that prepares for life is one that prepares definitely and adequately for these specific activities. However numerous and diverse they may be for any social class they can be discovered. This requires only that one go out into the world of affairs and discover the particulars of which their affairs consist. These will show the abilities, attitudes, habits, appreciations and forms of knowledge that men need. These will be the objectives of the curriculum. They will be numerous, definite and particularised. The curriculum will then be that series of experiences which children and youth must have by way of obtaining those objectives.

This way of thinking about curriculum theory and practice was heavily influenced by the development of management thinking and practice. The rise of 'scientific management' is often associated with the name of its main advocate **F.W. Taylor**. Basically what he proposed was greater division of labour with jobs being simplified; an extension of managerial control over all elements of the workplace; and cost accounting based on systematic time-and-motion study. All

three elements were involved in this conception of curriculum theory and practice. **For example**, one of the attractions of this approach to curriculum theory was that it involved detailed attention to what people needed to know in order to work, live their lives and so on. A familiar, and more restricted, example of this approach can be found in many training programmes, where particular tasks or jobs have been analysed – broken down into their component elements – and lists of competencies drawn up. In other words, the curriculum was not to be the result of 'armchair speculation' but the product of systematic study.

Bobbitt's work and theory met with mixed responses. One telling criticism that was made and can continue to be made, of such approaches is that there is no social vision or programme to guide the process of curriculum construction. As it stands it is a technical exercise. However, it was not criticisms such as this which initially limited the impact of such curriculum theory in the late 1920s and 1930s. Rather, the growing influence of 'progressive', child-centred approaches shifted the ground to more romantic notions of education. Bobbitt's long lists of objectives and his emphasis on order and structure hardly sat comfortably with such forms.

The Progressive movement lost much of its momentum in the late 1940s in the United States and from that period the work of **Ralph W. Tyler**, in particular, has made a lasting impression on curriculum theory and practice. He shared Bobbitt's emphasis on rationality and relative simplicity. His theory was based on four fundamental questions:

1) What educational purposes should the school seek to attain?
2) What educational experiences can be provided that is likely to attain these purposes?
3) How can these educational experiences be effectively organised?
4) How can we determine whether these purposes are being attained?

Like Bobbitt he also placed an emphasis on the formulation of behavioural objectives.

There was a series of steps leading to the product, and curriculum could be designed accordingly. The steps are:

Step 1: Diagnosis of need,

Step 2: Formulation of objectives,

Step 3: Selection of content,

Step 4: Organisation of content,

Step 5: Selection of learning experiences,

Step 6: Organisation of learning experiences,

Step 7: Determination of what to evaluate, and the ways and means of doing it.

Here are some of the problems with the product orientation:

1) Students are generally left out of the picture.
2) The objectives are not clear.
3) Students are not be able to solve unanticipated problems that arise.

Advantages

Advantage of curriculum as product are as follows:

1) Can be described in concrete terms and definite ways.
2) Provides direction for planning and development by producing a document.

Disadvantages

There are several disadvantages associated with curriculum as product, such as:

1) Limits curriculum to specific programmes, courses, activities, or outcomes described in those documents.
2) Assumes all possible outcomes can or will be described in such documents.
3) May separate processes of learning from what is to be learned.

3.5.2.3. Curriculum as Process

We have seen that the curriculum as product model is heavily dependent on the setting of behavioural objectives. The curriculum, essentially, is a set of documents for implementation. Another way of looking at curriculum theory and practice is via process. In this sense curriculum is not a physical thing, but rather the interaction of teachers, students and knowledge. In other words, curriculum is what actually happens in the classroom and what people do to prepare and evaluate. What we have in this model is a number of elements in constant interaction. It is an active process and links with the practical form of reasoning set out by **Aristotle.**

An open-ended, process-oriented curriculum is potentially less culture-bound, and thus may be more readily adapted to alternative settings without intruding on their cultural and situational variability. If appropriately conceived, process skills can be taught by building on those patterns indigenous of the background of the student, and then extending the processes to include the patterns of the wider community. To the extent that a minority student is able to employ such process skills in his/her daily encounters within his/her own and the larger society, s/he will be better able to blend those encounters into a lifestyle and world view that will contribute to the goal of cultural eclecticism.

Processes, with their open-endedness and capacity for self-renewal, can provide the basis for such a curriculum design.

According to Kimball (1976), Process, in its general sense, may be defined as "a function of change in the relationships among variables".

According to Parker and Rubin (1966), within the context of education, "process refers to the cluster of diverse procedures that surround the acquisition and utilisation of knowledge".

In this context, process may be considered at two levels, namely, **Process as content and Process of instruction**:

1) **Process as Content:** At this level, we are concerned with the content of education. If process skills are to become the "end" and the content is to serve as a means to that end, then the content itself should be organised around processes. In a process-oriented curriculum, therefore, processes should be reflected in the content, so that what is taught is consistent with the

goal toward which the teaching is directed. One way by which this may be accomplished is to replace the traditional list of academic subjects with a list of appropriate general processes and devise an educational programme aimed at developing an understanding of those processes. Such a process-oriented curriculum could overcome many of the limitations of the traditional subject-oriented approach. An outline of the content of such a curriculum is offered by **Berman (1968),** who identifies the following process skills as the minimum essential ingredients such as perceiving, communicating, loving, decision-making, knowing, organising, creating, and valuing. In her model, these skills would serve as the core around which the educational programme would be organised. She presents several alternative organising schemes, some that emphasise processes alone, and others that blend processes with the traditional subjects.

2) **Process of Instruction:** Another effort to employ process as content in school learning is that of **Parker and Rubin** (1966), who summarise the tasks to which process-oriented curriculum developers must address themselves as follows:
   i) A retooling of subject matter to illuminate base structure and to insure that knowledge which generates knowledge takes priority over knowledge which does not.
   ii) An examination of the working methods of the intellectual practitioner, the biologist, the historian, the political scientist, for the significant processes of their craft, and the use of these processes in our classroom instruction.
   iii) The utilisation of the evidence gathered from a penetrating study of people doing things, as they go about the business of life, in reordering the curriculum.
   iv) A deliberate effort to school the child in the conditions for cross-application of the processes he has mastered the ways and means of putting them to good use elsewhere.

Both of the approaches to a process-oriented curriculum described above go a long way in reorganising the curriculum content to shift its emphasis into a process framework which is more readily accommodating to the learning needs of minority students.

Parker and Rubin point out the need for an alternative teaching approach when they state that "the requirements posed by a process-based curriculum deal primarily with the identification of worthwhile processes to which students should be exposed, the design of instructional strategies that make effective use of the processes, and the realignment of subject matter so that it complements the instructional strategies".

Berman also acknowledges the need for a revised approach to teaching in her statement of the conditions necessary to acquire process skills. She lists those conditions as:

i) The opportunity to experience the use of the skill in a wide variety of contexts and,

ii) The chance to verbalise the meaning of the skill so interplay can exist between the logical and the intuitive.

The experiential emphasis implied by **Berman** coincides with the need to bring schooling in closer alignment with community socialisation processes. What we need then is a way to link the content of a process-oriented curriculum to the experiential and situational framework of everyday life, so that what is learned and how it is learned can be more effectively merged into a meaningful whole.

3.5.2.4. Curriculum as Praxis

First, this notion holds that **practice** should not focus exclusively on individuals alone or the group alone, but pays careful attention to the **way** in which individuals and the group create understandings and practices, as well as meaning.

For example, in sessions that seek to explore the experiences of different cultural and racial groups in society, we could be looking to see whether the direction of the work took people beyond a focus on individual attitudes. **Second,** we could be looking for a commitment expressed in action to the exploration of educators' values and their practice. **Third**, we could expect practitioners committed to praxis to be exploring their practice with their peers. They would be able to say how their actions with respect to particular interventions reflected their ideas about what makes for the good, and to say what theories were involved.

3.5.2.5. Curriculum as Context

Curriculum is a social enterprise. Many educationalists believe that curriculum, as practice, cannot be understood adequately or changed substantially without attention to its setting or context. Curriculum is contextually shaped. Of special significance here are examinations and the social relationships of the school – the nature of the teacher-student relationship, the organisation of classes, tracking, and so on. These elements are sometimes known as the **hidden curriculum.**

The learning associated with the hidden curriculum is most often treated in a negative way. It is learning that is smuggled in and serves the interests of the *status quo*. The emphasis on regimentation, on time management, and on tracking are sometimes seen as preparing young people for the world of capitalist production. What we do need to recognise is that such hidden learning is not all negative and can be potentially liberating.

By paying attention to the social context, we learn about how important the spaces between lessons really is; we can begin to get a better grasp of the impact of structural and socio-cultural process on teachers and students. Many problems in schools are due to the inability of teachers or school leaders to see the powerful factors behind learning. Economics, social structure, family dynamics, power struggles, and the rest contribute to the learning process.

3.5.3. Participatory Approach

Participatory approach is based on solving the learner's problem in real life, using the target language as a tool for this purpose. Learners bring their outside problems in to class. Participatory approach is geared towards planning and conducting the research process with those people whose life-word and meaningful actions are under study.

The main goal of participatory approach is to help student to understand the social, historical or cultural forces that affect their lives, and then to help empower students to take action and make decision in order to gain control over their lives.

Participatory approach use two elements, they are:
1) Group work (discussion),
2) Public speaking.

Participatory approach is based on solving the learner's problem in real life, using the target language as a tool this purpose. Learners bring their outside problems into class. This method can build confidences of the student so that they can be active in the community based-organisation and also in their lives.

In recognition of the varying importance and influence of different stakeholders in the curriculum development process, more and more education and training institutions around the world are encouraging Participatory Curriculum Development (PCD) processes, and at the same time building functional linkages with their local communities. Participatory curriculum development approaches create working partnerships between teachers, learners and other stakeholders, and aim to increase ownership of the full learning process, thus improving the potential for effective learning through participation.

Principles of Participatory Curriculum Development

Participatory curriculum development is underpinned by a number of basic principles:
1) Participation is not only a means but an end in itself,
2) Stakeholders in education who might normally be marginalised gain the right to take part in decision-making about teaching and learning,
3) As a basic human right, education can help to reduce poverty and social injustice.
4) Greater participation increases the likelihood of this goal being achieved, and so should be a prerequisite for education,
5) Participation by relevant stakeholders may take place throughout the entire curriculum development process, including planning, delivery and evaluation.

Typology of Participation

Typology of Participation is as follows:
1) Passive participation,
2) Participation in information giving,
3) Participation by consultation,

4) Functional participation,
5) Interactive participation, and
6) Self-mobilisation.

Advantages of Participatory Approach (PA)

Various advantages of participatory approach are:

1) Participation carries with it feelings of ownership, and builds a strong base for the intervention in the community,
2) It can bring together and establish ties among community members who might normally have no contact,
3) A participatory planning process builds trust, and
4) A participatory planning process generally reflects the mission and goals of grassroots and community-based organizations.

Disadvantages of Participatory Approach (PA)

Participatory approach has its shortcomings which are as follows:

1) A participatory process takes longer,
2) Members of the target population or the community may not agree with the experts about what is needed,
3) It may be difficult to assure that all the right people get to the table, and
4) A participatory planning process takes patience and commitment on every ones part.

3.6. EXERCISE

3.6.1. Very Short Answer Type Questions

1) What do you mean by curriculum?
2) Define curriculum as a product.
3) Define learner-driven approach.
4) Write some principles of curriculum.
5) Write some organising components of curriculum.

3.6.2. Short Answer Type Questions

1) Explain types of curriculum.
2) What are the bases of curriculum?
3) What is traditional approach of curriculum?
4) What is critical approach of curriculum?
5) What are the various principles of curriculum?

3.6.3. Long Answer Type Questions

1) Define curriculum. What are organising curriculum components.
2) Write a detail note on approaches of curriculum theory.
3) Focus on participatory approach of curriculum theory.
4) Describe various bases of curriculum. Focus on any one of them.
5) Discuss in detail about philosophical bases of curriculum.

UNIT 4

Curriculum Design Models

4.1. CURRICULUM DESIGN

4.1.1. Meaning and Definition of Curriculum Design

Curriculum design is about how people envision what a curriculum should be. Designing a curriculum for a new school is a challenging and rewarding task. Designing a curriculum is ideally something that is first of all effective and matches assessment with what is taught in a course. However, it also aims to give students a broader perspective.

Curriculum design is an aspect of the educational profession which focuses on developing curriculum for students. Some educational professionals specialise in curriculum design, and may spend all of their time working on curricula, rather than teaching in the classroom, while in other cases working teachers develop their own curricula. Curriculum design is seen differently by different people. It depends from where one is viewing the process. **For example,** in the classroom, the teacher is concerned with the design associated with mathematics, language, arts, social studies, etc.

Pratt defines design as a deliberate process of devising, planning, and selecting the elements, techniques, and procedures that constitute an organised learning endeavour.

According to Saylor and Alexander, "Curriculum design is the pattern or frame work of structural organisation used in selecting, planning and carrying and forward educational experience in the school. Design is thus the plan that teachers follow in providing learning activities."

According to Hilda Taba, "Curriculum design is a statement which identifies the elements of the curriculum, states what their relationships are with each other and indicates the principles of organisation and the requirements of that organisation for the administrative conditions under which it is to operate. A design, of course, needs to be supported with and to make explicit a curriculum theory which establishes the sources to consider and the principles to apply."

According to Warwick, "To a large extent this is inevitable and need not be disastrous so long as it is the same basic curriculum that each member of staff is interpreting, that procedures are instituted whereby its progress is discussed and monitored regularly at all levels and that it is recognised that for more than the academic content of a syllabus is involved."

4.1.2. Characteristics of Curriculum Design

Characteristics of curriculum design are as follows:

1) **Curriculum Design is Purposeful:** It is not just to "have" a course of study. Its grand purpose is to improve student learning, but it may have other purposes as well.

2) **Curriculum Design is Deliberate:** To be effective, curriculum design must be a conscious planning effort.

   It is not casual, nor is it the sum total of lots of different changes being made in the curriculum over weeks, months, and years. It involves using an explicit process that identifies clearly what will be done, by whom, and when.

3) **Curriculum Design is Creative:** Curriculum design is not a neatly defined procedure that can be pursued in a rigorous series of steps. At every stage of curriculum design there are opportunities for innovative thinking, novel concepts, and invention to be introduced.

4) **Curriculum Design Operates on Many Levels.** Design decisions at one level must be compatible with those at the other levels.

5) **Curriculum Design Requires Compromises:** The challenge is to come up with a curriculum that works well perfection and it is not its aim. In developing a design that meets complex specifications, trade-offs inevitably have to be made among benefits, costs, constraints, and risks.

6) **Curriculum Designs can Fail:** There are many ways in which curriculum designs can fail to operate successfully. A design can fail because one or more of its components fail or because the components do not work well together.

7) **Curriculum Design has Stages:** Curriculum design is a systematic way of going about planning instruction, even though it does not consist of some inflexible set of steps to be followed in strict order.

4.1.3. Sources for Curriculum Design

Following are considered the main sources of curriculum design:

1) **Science:** Scientific method provides meaning for the curriculum design. Designs that stress learning how to learn or "thinking" curricula emphasise scientific procedures. Coincides with the scientific and rational world of Western culture.

2) **Society:** School is an agent of society, thus, the school should draw its ideas for the curriculum from the analysis of the social situation. Curriculum design can only be completely understood if it is contextualised socially, economically, and politically.

3) **Eternal and Divine Sources:** Draw on the past for guidance as to what is appropriate content. Related to eternal truth revealed through such sources as the Bible or other religious documents.

4) **Knowledge:** Disciplined Knowledge has a particular method or methods by which scholars extend its boundaries. Undisciplined knowledge does not have unique content, but has content that is clustered according to the focus of the investigation.

5) **The Learner as a Source:** Curriculum should be derived from what we know about the learner how he learns, forms attitudes, generates interests, and develops values.

4.1.4. Steps in Curriculum Design

Fiorno and Nowak have suggested the following steps in curriculum design:

1) Identification of the problem,
2) Diagnosis of the problem,
3) Search for alternative solutions,
4) Selection for the best solutions,
5) Ratification of the solution by the organisation,
6) Authorisation of the solution,
7) Preparation for adopting of the solution,
8) Adoption of the solution,
9) Direction and guidance of the staff, and
10) Evaluation of the effectiveness of the solution.

For many, an essential step in the design and development of the curriculum is an understanding of the role of constructive alignment. Its primary focus is to ensure that there is a clear and direct relationship between the learning outcomes students are expected to meet the methods by which they are assessed and the learning activities designed to enable them to achieve the intended learning outcomes.

4.1.5. Importance of Curriculum Designs

Curriculum design involves the creation of the set of operating principles or criteria, based on theory, that guide the selection and organisation of content and the methodology used to teach that content.

With the accelerated rate of social change, schools are preparing youth for adulthood in a society not yet envisioned by its members. Hawley's words still ring true – "it's not a question of whether or not to change, but whether or not we can control the way we are changing. We are living in a wonderland world, where you have to run just to stay where you are. To get anywhere you have to run even faster than that. The pieces on the chess board keep changing and the rules are never the same."

1) It focuses attention on goal,
2) It improves the probability of success,
3) It improves economy of time and efforts,
4) It facilitates communication and coordination of projects, and
5) It reduces stress.

4.1.6. Various Models of Curriculum Design

Curriculum design and development models are very important in guiding teachers, administrators and educational planners to verify whether the institution is implementing the needs of the students they are serving. Every model has its own goals and objectives based on the needs of individuals, community and the society as a whole. The implementation process lies on the teachers as disseminators of learning and education. Structuring the curriculum focuses to a greater or lesser degree on the relationship between the content and the needs of the student. Increasingly students are provided with opportunities to choose what subject matter they would like to learn. There are several standard models of curriculum design:

1) Discipline design,
2) Learner centred design, and
3) Problem centred design.

4.1.7. Discipline Design

The discipline design that appeared in the post-World War II era evolved from the separate subject design. This new design grew rapidly in popularity during the 1950s and reached its zenith during the mid-1960s. Its popularity was tarnished somewhat during the student protests of the 1970s, but it is still present in much curriculum organisation in the elementary and secondary schools and especially in colleges and universities. Like the separate subject design, the discipline design's basis is the inherent organisation of content. However, whereas the subject design does not make clear the foundational basis upon which it is organised or established, the discipline design's orientation does specify its focus on the academic disciplines.

King and Brownell, proponents of this design, indicate that a discipline is specific knowledge that has the same essential characteristics – As a community of persons, an expression of human imagination, a domain, a tradition, a mode of inquiry, a conceptual structure, a specialised language, a heritage of literature, a network of communications, evaluative and affective stance, and an instructive community.

4.1.8. Learner-Centred Design

All curricular makers are concerned with creating curricula that are valuable to students. In response to those educational planners who consider that in creating curricula of value one must emphasise subject matter, educators early in this century asserted that students are the centre or focus of the programme. Supporters of this posture largely progressives, advocated what have come to be called learner centred design.

The learner centred design may be based on the anticipated needs and interests of the learners based on their stage of development. Usually, this curriculum is built upon the normal activities children engage in, such as playing, storytelling, drawing, and the like. In this kind of curriculum, content is not organised into subjects like Mathematics, English, or Science. Instead, content may be subdivided into course

works such as storytelling, playing, singing, etc. Another probable design under this category may be based on the actual needs and interests of the learners as they arrive in school. They choose what they want to learn and the teacher merely serves as a guide (e.g., where to get the necessary information). After a learner has completed his investigation of the problem that he has chosen, he makes a presentation to the teacher or takes a test on the problem. With this design, no curriculum plan is made by the teacher because the learner himself decides what he wants to learn. Learner centred designs have been criticized as neglecting the intellectual development of the learners, especially in the elementary grades where the learners are supposed to be equipped with the basic understanding and skills needed for the next higher level of schooling. The thesis requirement in the graduate school and in some tertiary schools is anchored on the learner centred design. These educational levels also make provision for broad fields design and for society centred design, through the social action/community outreach programme. This shows that the curriculum can be a combination of different designs.

Characteristics of Learner Centred Design

The curriculum design on the needs and interests of student has these characteristic and features:

1) The curriculum plan is based on knowledge of learner's needs and interests in general and diagnosis the specific needs and interests of the population served by the plan.
2) The curriculum plan is flexible, to accept new modification to conform to the needs and interests of particular learner's. In fact, in some curriculum designs the learner may develop his or her own curriculum plan with the guidance of a teacher.
3) The learner is consulted and tutored individually at difficult points in the curriculum and instructional process.

Types of Learner Centred Design

Learner centred designs are those identified as child centred designs, experience designs, romantic/radical designs, and humanistic designs:

1) **Child Centred Designs:** At times, especially when the learner centred design was first gaining a foothold in educational thinking, it's advocated insisted that virtually all school learning activities should be centred on the felt needs and interests of the child. Many of these early advocates rejected the traditional notion of the child as a miniature adult and accepted the romantic metaphor of the child as a flower that would unfold naturally with the proper "educational gardening". **Beane *et al.***, the child centred design, often attributed to **John Dewey**, was really conceived by **Parker**, who laid the foundations for this movement. He tired out his ideas while he was superintendent of schools in Quincy Massachusetts.

2) **Experience Centred Designs:** Experience centred curriculum designs closely resembled the child centred designs in that they used the concerns of children as the basis for organising the children's school world. However, they differ from child centred designs in view that the interests and needs of children cannot be anticipated and therefore, a curriculum framework cannot

be planned for all children. The needs and interests of the children would determine the actual curriculum. Growth and learning were considered to be completely dependent on the active participation of children in activities that were congruent with their needs. Subjects were only furnished to help children solve problems of their own choosing. It also put people in a posture of ignoring the vast amount of information they had about children's growth and development – cognitively, affectively, emotionally and socially.

3) **Romantic (Radical) Designs:** The view of the child has been carried to more recent times by reformers who advocate radical school modification. These individuals have adopted the tenets of romantic naturalism. Rarely do they note, however that their ideas have a rather long history, dating back to at least the time of **Rousseau**. A major weakness of the learner centred design, especially the romantic designs according to its educative inefficacy. A curriculum based on children's own needs and interest certainly cannot adequately prepare those children for life. Students have not had the experiences necessary to understand what is needed to function effectively in the current and future world. Also, such a decision may not even consider social goals. The design also has some other weakness or limitations. Perhaps a most practical limitation is that commercial materials are neither available nor producible if the educational assumption is that individuals bring idiosyncratic needs and interests to the school. Also, the design assumes that teachers have an extraordinary range of skills and competencies. Teachers would have to be renaissance persons, psychologists and, masters of the unique dimensions of individuals in order to foster effective teacher pupil interactions.

4) **Humanistic Designs:** The design gained prominence in then 1960s and 1970s, partly in response to the excessive emphasis on the disciplines during the early 1960s. Other names for this orientation have been effective education, open education and existential education. As with learner centred designs, the focus of humanistic designs has been on the learners – especially students self-concepts. Much of the underpinning for this design has been "third force" psychology and the humanities. Humanistic educators realise that the cognitive, affective and psychomotor domains are interconnected and that the curriculum design should address these dimensions. Some educators in this camp and in the subject centred camp would argue that in addition to these three domains, the two domains of socialisation and spirituality should also be addressed. Humanistic curriculum designs have many of the same weakness as learners centred designs. They require the teachers having great skill and competence in dealing with individuals. Moreover, available educational materials are often not appropriate.

4.1.9. Problem Centred Designs

The third major type of curriculum designs, which is problem centred, focuses on the problems of living on the perceived realities of institutional and group life both for the individual and for society in general. Problem centred curriculum designs are organised to reinforce cultural traditions and also to address those community and societal needs that are currently unmet. They address individual's problem as well.

Even though these designs place the individual in a social setting they are unlike learner centred designs in a major way. Problem centred designs are planned before the arrival of students. However, problem centred curricularists realise that because their concern is with genuine life problems, they will sometimes have to adjust to cater to the concerns and situations of learners.

Because problem centred designs draw on social problems and the needs, interests, and abilities of learners, several variations exist. Some focus on persistent life situations, others centre on contemporary social problems, others address areas of living and some even concerned with the re-construction of society. What seems to distinguish these various types is the relative degree of emphasis they place on social needs as opposed to individual needs.

Types of Problem-Centred Design

The basic 3 types of problem centred designs are:

1) **Life Situations Design:** It uses the past and present experiences of learners as a means to analyse the basic areas of living. As a starting point, the pressing immediate problems of the society and the student's existing concerns are utilised. Based on Herbert Spencer's curriculum writing, his emphases were activities that sustain life, enhance life, and 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.

2) **Core Design:** It centres 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.

3) **Social Problem/Re-Constructionist Designs:** Curriculum should address contemporary social problems and social action projects aimed at re-constructing society. Educators will affect social change and create a more just society.

4.2. CURRICULUM DEVELOPMENT

4.2.1. Meaning and Definition of Curriculum Development

Curriculum development is defined as "planned, purposeful, progressive, and systematic process in order to create positive improvements in the educational system." Every time there are changes or developments happening around the world, the school curricula are affected. There is a need to update them in order to address the society's needs.

It is defined as "the process of selecting, organising, executing, and evaluating learning experiences on the basis of the needs, abilities and interests of the learners and the nature of the society or community."

It is a systematic planning of what is to be taught and learned in schools as reflected in the courses of study and school programmes. It describes all the ways

in which training or teaching organisation plans and guides learning. This learning can take place in groups or with individual learners. It can take place inside or outside a classroom.

There must be a chain of developmental process to develop a society. First, the school curriculum particularly in higher education must be developed to preserve the country's national identity and to ensure its economy's growth and stability. Thus, the president of a country must have a clear vision for his people and for the country as well.

In order to develop it, curriculum experts or specialists should work hand in hand with the lawmakers, the local government officials, such as governors, mayors, and others; the business communities and industries; and stakeholders to set implementing rules and policies for educational reforms.

4.2.2. Concept of Curriculum Development

There are several concepts that can guide the development and review of all types of curricula at both the programme and course level:

1) **Alignment and Coherence:** All parts of the curriculum must be logically consistent with each other. There must be a match or a fit between parts.

2) **Scope:** The range or extent of content (whether information to be learned, skills to be acquired, etc.) that will be included in a course or programme. It must be sufficient to lead learners to achieve the programme or course outcomes. However, there is a constant tension between breadth and depth when considering scope.

3) **Sequence:** Sequence is the ordering of learning experiences so that learners build on previous experiences and move to broader, deeper or more complex understandings and applications. Common ways of sequencing content within courses include simple to complex, whole to parts (or part to whole), prerequisite abilities, and chronologies.

4) **Continuity:** Continuity refers to the vertical repetition of major curriculum elements in different courses over time (also known as vertical organisation or articulation). It is important to identify the themes or skills that need to run through a programme and to map how they will be addressed at each level.

5) **Integration:** Integration refers to the horizontal relationship among major curriculum components at any given point in time (also known as horizontal organisation). Integration fosters reinforcement of key learning and is needed to promote application of learning across course boundaries.

4.2.3. Objectives of Curriculum Development

Curriculum development has some important objectives:

1) Allround development of curriculum.
2) Allround development of students.
3) To involve human experiences.
4) To develop moral character, discipline, honesty.

5) To develop thinking, reasoning.
6) To consider stages of growth and development.
7) Increase right type of feeling.
8) To create democratic attitude.
9) Integration of various subjects.
10) To determine mode of interaction.

4.2.4. Principles of Curriculum Development

Hernawan Asep Herry et al (2002) stated following five principles of curriculum development:

1) **Principle of Relevancy:** Curriculum development should internally and externally be relevant. Internally which should be relevant with the components of the curriculum are goals, materials, strategies, organisation and evaluation. While externally components should be relevant to the demands of science and technology, demand and potential learners (psychological relevance) and the demands and needs of the community development.

2) **Principle of Flexibility:** In curriculum development effort that produced by nature should be flexible in its implementation, which allow for adjustments based on the situation and condition of the place and time.

3) **Principle of Continuity:** The continuity and the existence of curriculum, both vertically and horizontally should be appeared in developing curriculum. Learning experiences provided the curriculum should pay attention to sustainability, both inside the classroom level, between levels of education, as well as between levels of education with the type of work.

4) **Principle of Efficiency:** In curriculum development efficiency should be seen, that can utilize time, cost and other sources that there is an optimal, carefully and precisely so that the results should be obtained adequately.

5) **Principle of Effectiveness:** Curriculum development activities seek to achieve goals without the wasteful activities, both in quality and quantity.

4.2.5. Stages of Curriculum Development

Curriculum development is an important process. Curriculum development passes through various stages. These stages are the bases of development of curriculum. The developmental stages mentioned by **Hilda Taba** are as follows:

1) **Diagnosing Needs:** This is the first stage of curriculum development. This stage starts before planning the curriculum. Diagnosis helps in general analysis of problems, conditions and difficulties. The main purpose of diagnosis is to generate new ideas about the curriculum, by knowing thoroughly from various sources such as students' cumulative recording parents' interviews, children's cases and their IQ achievements. This kind of analysis of various aspects would lead to come out with a new conception of curriculum development. Thus, diagnosis leads to understand the prime needs at different stages of curriculum.

2) **Formulating Specific Objectives:** This is the stage in which various objectives formulated relating with curriculum. Diagnosis stage provides some clues to formulate necessary objectives and lead to generate higher learning. Formulation of objectives is done on the basis of concepts or ideas to be learnt, attitude, sensivities and feeling to be developed.

3) **Selecting the Content:** The objectives and needs provide a basic idea and guidance to select the relevant content. While selecting the content following should be planned meticulously:
   i) Selecting the topics,
   ii) Selecting the basic ideas, and
   iii) Selecting the specific content.

   The first task is to select the relevant topics through which the formulated objectives can be achieved unit by unit and the topics have to be finalised. It is considered that the different topics can be covered under each subject, class and level. After that the idea needs to pay attention to incorporate into the broad content. To close the idea and topics, the specific content is planned to finalise the broad areas under the curriculum.

4) **Organising the Content:** After finalising the content, the content has to be organised. While organising the content following points should be kept in mind:
   i) Sequential order,
   ii) Concrete to abstract,
   iii) Simple to complex,
   iv) Known to unknown,
   v) Immediate to remote, and
   vi) Easy to difficult.

   In all these there should be connection between ideas, facts and relationships.

5) **Selecting and Organising Learning Experiences:** With content in hand it is easy to plan for learning experiences or activities. The criteria with which the content is drawn should provide or plan or visualise what student need to experience in order to acquire certain behavioural competencies and sequence of the experiences. The learning experiences are expected to be:
   i) Introduction, opening and orientation,
   ii) Development, analysis and study,
   iii) Generalisation,
   iv) Application, summary and culmination, and
   v) Rhythm of learning activities.

   By above these approaches learning experiences can be selected and organised to facilitate learning. While teaching any unit, students can be involved and help them to make connection to their personal experiences, connect to the community or share the experiences of their parents. Thus, the teacher plans the learning experiences by allocating tasks which are useful for the students.

6) **Evaluation:** Evaluation is the process of determining the objectives, diagnosis or establishment of baseline for learning and appraising progress and changes.

There are different methods and approaches of evaluation to know the progress of the child. Mostly, evaluation is in a way continuous diagnosis along with the comparison of results. Even several informal devices can also be used to evaluate the outcomes of the unit and curriculum on the whole. Finally, whether the objectives of curriculum are achieved needs to be evaluated.

7) **Checking the Balancing and Sequencing:** After completing all stages unit by unit and the whole curriculum, it is necessary to check the overall consistency among its parts or individual aspects. Every aspects needs to be checked whether the core ideas are reflected in the content, whether the suitable learning experiences are planned for the content and whether the overall achievement of objectives is planned for the overall progress of the topic. On the whole, a proper sequencing is maintained logically and there is balancing in the overall design of the curriculum.

4.2.6. Importance of Curriculum Development

Development of curriculum is important in this way:

1) Curriculum development has a broad scope because it is not only about the school, the learners and the teachers but it is also about the development of a society in general.
2) In today's knowledge economy, curriculum development plays a vital role in improving the economy of a country.
3) It also provides answers or solutions to the world's pressing conditions and problems, such as environment, politics, socio-economics and other issues on poverty, climate change and sustainable development.
4) It can also be used in funding research and development endeavours, and in putting up school facilities, libraries, and laboratories.
5) The country's economy can improve the people's way of life through curriculum development.
6) If universities have curricular programmes that are innovative and in demand in the local or global markets, many students even from foreign countries will enroll. Higher number of enrolees would mean income on the part of the universities. As a result, if the income is big, it can be used for teachers' promotion, scholarship and remuneration.

4.2.7. Difference between Curriculum Development and Curriculum Design

Differences between curriculum development and design are given in following **table 4.1**:

Table 4.1: Difference between Curriculum Development and Curriculum Design

Basis of Differences	Curriculum Development	Curriculum Design
Meaning	It is a systematic planning of what is to be taught and learned in schools as reflected in the courses of study and school programmes.	It refers to the way we conceptualise the curriculum and arrange its major components (subject matter content and learning experiences) to provide direction and guidance as we develop the curriculum.

Nature	Integration of various subjects.	Curriculum design is creative in nature.
Objectives	All-round development of curriculum and student.	Its main objective is to improve student learning.
Scope	Curriculum development has a broad scope.	Curriculum design has not a broader scope.
Process	Involves planning, implementation and evaluation.	It is a part of curriculum development.
Importance	Curriculum development plays a vital role in improving the economy of a country.	It constitutes an organised learning endeavour.

4.2.8. Components Required in Curriculum Development

There are five key elements of curriculum development, according to **Tyler** "it is essential as a part of comprehensive theory of organisation to show just what are the elements will serve satisfactory as organising elements". **According to Herrick and Tyler,** following are the components of curriculum development:

1) **Situational Analysis:** Situational analysis means the analysis of different conditions such as emotional, political, cultural, religious and geographical conditions of a country. This will help the curriculum planners in the selection of objectives, selection of organisation of learning materials, and in suggesting appropriate evaluation procedure.

2) **Formulation of Objectives:** There are following main factors for formulating the objectives of education:
   i) Society
   ii) Knowledge
   iii) Learner
   iv) Learning processes

   All of these factors are to be considered while selecting and formulating the educational objectives.

3) **Selection of Content:** One of the important elements is the selection of content for a subject. At the time of subject matter selection, the following factors are to be kept in mind:
   i) Availability of sources and resources,
   ii) Demand of the society,
   iii) International needs of the people,
   iv) Level and age of the learner or student,
   v) Methods of content organisation,
   vi) Number of courses offered,
   vii) Quantity and qualification of teaching staff,
   viii) Scope of subject matter,
   ix) System of examination, and
   x) Type of society and culture.

4) **Strategies and Methods of Teaching:** These are strategies and methods of teaching adopted by the teachers during instruction and learning experiences.

This will certainly not fair to ask a teacher for achieving certain objectives without giving any guidelines. In most of the countries curriculum development is a centralised process. Teachers are not directly involved in this phase. Most of the teachers do not know the process of achieving desired goals. After determining the goals and objectives the next problem is the selection of strategies and methods of teaching. In this it is decided appropriateness and flexibility of curriculum.

5) **Evaluation:** Evaluation is one of the dynamic processes, which needs a continuous research and evaluation for its betterment in order to cope with the variable demands of the society and bring about desirable changes. Curriculum evaluation is not a student evaluation. It is a broader term being used to make judgment about the worth and effectiveness of it. With the help of evaluation curriculum planner can modify the curriculum by bringing about desirable changes.

4.3. MODELS OF CURRICULUM DEVELOPMENT

4.3.1. Introduction

As we know that curriculum development is the process of assessing needs, formulating objectives and developing instructional opportunities and evaluation. It is the process of creating planned curriculum, pedagogy, instruction and presentation modes.

A model is really the first step in curriculum development. A curriculum model determines the type of curriculum used; it encompasses educational philosophy, approach to teaching, and methodology. The good news is, unless you have been hired to design curriculum, you will not come across many curriculum models. However, it is good for educators to be familiar with the models used in their schools.

4.3.2. Components of Curriculum Development Model

Curriculum models have five areas they define, each looking at education from a different slant:

1) **Focus:** The focus concept looks at a subject or a student and centres instruction on them.

2) **Approach:** The approach component is a traditional or modern method and looks at the type of instruction that will be used.

3) **Content:** In the content component, a slant towards a topic-based or content-based is used, asking how units or strands will be written.

4) **Process:** The process structure looks at assessment – formative or accumulative.

5) **Structure:** Finally, structure components focus on the system of review, determining how the curriculum will come up for revision.

4.3.3. Curriculum Model Frameworks

Curriculum models are framed by:

1) **Subject or Discipline Centred:** In this framework, the curriculum is organised on subjects, like math or science.

2) **Integrated:** Just like it sounds, this framework pulls many subjects together. We see this model used in problem based learning and experiential learning.

3) **Spiral:** In this framework, the content is presented several times across the span of the school year. Seen mostly in math, using this design allows students to be introduced and then revisit material often.

4) **Inquiry or Problem Based:** Not to be confused with integrated models, this curriculum focuses on a central problem or question. In this frame, all curriculums are problem based, while in integrated it may or may not be.

5) **Experiential:** Using this framework allows students to participate in real-life ways with their work such as, experimenting with hypothesis, working through problems, and finding solutions.

4.3.4. Hilda Taba Model

A well-known approach to curriculum development was proposed by **Hilda Taba** in her book 'Curriculum Development Theory and Practice', published in 1962. She argued that there was a definite order in creating a curriculum. She believed that teachers, who teach the curriculum, should participate in developing it which led to the model being called the grass-roots approach. She noted 7 major steps to her grass-roots model in which teachers would have major input. She was of the opinion that the Tyler model was more of an administrative model. **Taba** believed that "To evolve a theory of curriculum development and a method of thinking about it, one needs to ask what demands and requirements of culture and society both are, both for the present and the future. Curriculum is a way of preparing young people to participate in our culture".

4.3.4.1. Stages in Hilda Taba Model

There are seven stages as determined by **Hilda Taba:**

1) **Diagnosis of Need:** The teacher who is also the curriculum designer starts the process by identifying the needs of students for whom the curriculum is planned. **For example,** the majority of students are unable to think critically.

2) **Formulation of Objectives:** After the teacher has identified needs that require attention, he or she specifies objectives to be accomplished.

3) **Selection of Content:** The objectives selected or created suggest the subject matter or content of the curriculum. Not only should objectives and content match, but also the validity and significance of the content chosen needs to be determined, i.e., the relevancy and significance of content.

4) **Organisation of Content:** A teacher cannot just select content, but must organise it in some type of sequence, taking into consideration the maturity of learners, their academic achievement, and their interests.

5) **Selection of Learning Experiences:** Content must be presented to students and students must be engaged with the content. At this point, the teacher selects instructional methods that will involve the students with the content.

6) **Organisation of Learning Activities:** Just as content must be sequenced and organised, so must the learning activities. Often, the sequence of the learning activities is determined by the content. But the teacher needs to keep in mind the particular students whom he or she will be teaching.

7) **Evaluation and Means of Evaluation:** The curriculum planner must determine just what objectives have been accomplished. Evaluation procedures need to be designed to evaluate learning outcomes.

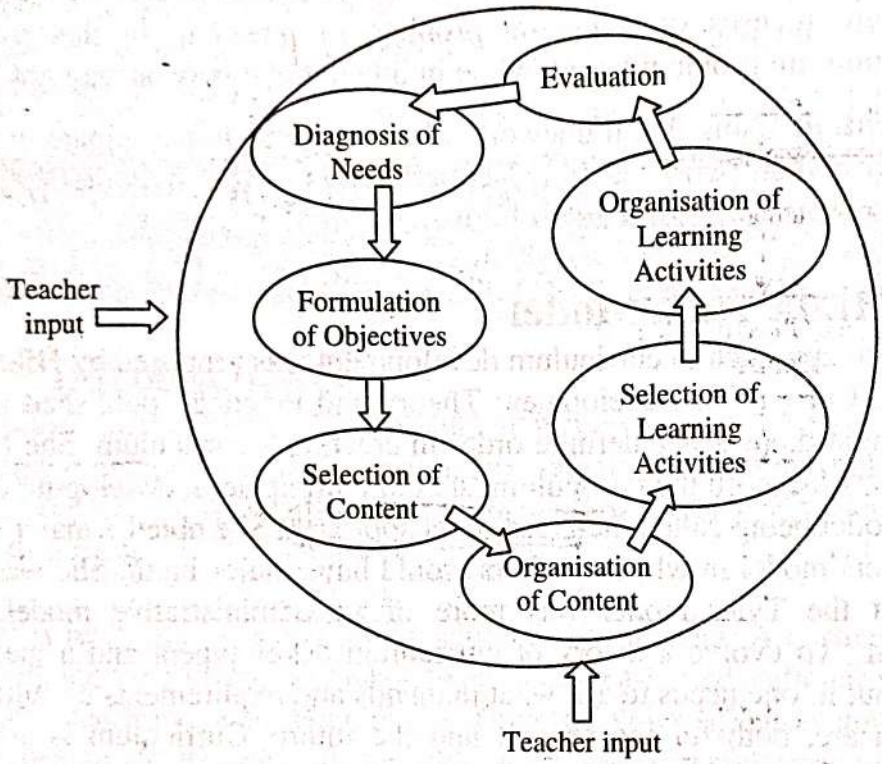


Figure 4.1: Stages of Taba Model

4.3.4.2. Applications of Taba Model

Main applications of Taba model are as follows:

1) This model is currently used in most curriculum designs,
2) Identifying the needs of the students,
3) Developing objectives,
4) Selecting instructional method,
5) Organising learning experiences, and
6) Evaluating.

4.3.4.3. Strengths of Taba Model

Six major strengths of Taba model are as follows:

1) It gives teachers a greater role by not just making them implement the curriculum but also developing them.
2) It uses the inductive method.
3) Teacher approach is used in this model.

4) It is noted that teachers are aware of the students' needs therefore they are the ones that should develop the curriculum.
5) It considers curriculum as a "plan for learning".
6) Importance is given to objectives in order to establish a sense of purpose for deciding what to include, exclude and emphasise in a curriculum.

4.3.5. Saylor and Alexander Model

Glalen Saylor and William Alexander viewed curriculum development as consisting of four steps. According to them, curriculum is "a plan for providing sets of learning opportunities to achieve broad educational goals and related specific objectives for an identifiable population served by a single school centre."

In this model there are various stages through which curriculum development takes place. These stages are:

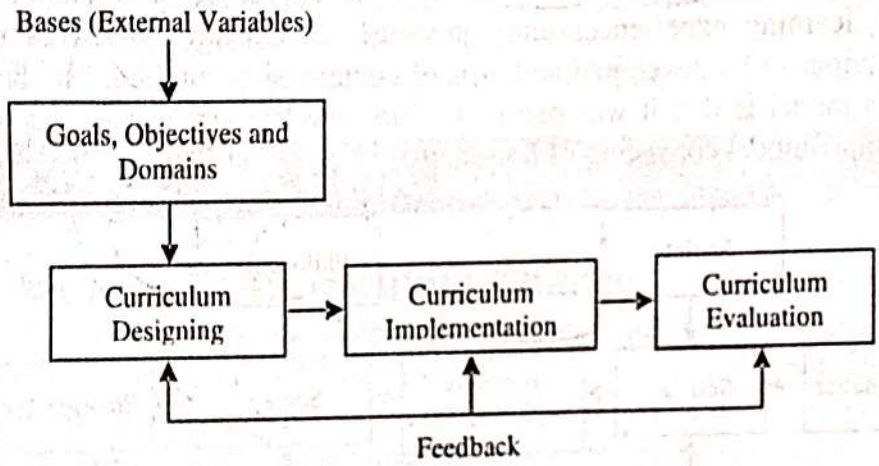


Figure 4.2: Saylor and Alexander Model

1) **Goals, Objectives and Domains:** The model indicates that curriculum planners begins by specifying the major educational goals and specific objectives they wish to accomplish. Each major goal represents a curriculum domain and they advocate 4 major goals or domains – Personal development, human relations, continued learning skills and specialisation. The goals, objectives and domains are selected after careful consideration of several external variables such as findings from educational research, accreditation standards, views of community groups and others.

2) **Curriculum Designing:** Once the goals, objectives and domains have been established, planners move into the process of designing the curriculum. Here decision is made on the appropriate learning opportunities for each domain and how and when these opportunities will be provided. Will the curriculum be designed along the lines of academic disciplines, or according to student needs and interests or along themes. These are some of the questions that need to be answered at this stage of the development process.

3) **Curriculum Implementation:** After the designs have been created the next step is implementation of the designs by teachers. Based on the design of the

curriculum plan teachers would specify instructional objectives and then select relevant teaching methods and strategies to achieve the desired learning outcomes among students in the classroom.

4) **Evaluation:** Finally, curriculum planner and teachers engage in evaluation. The model proposed that evaluation should be comprehensive using a variety of evaluation techniques. Evaluation should involve the total educational programme of the school and the curriculum plan, the effectiveness of instruction and the achievement of students. Through the evaluation process, curriculum planner and developers can determine whether the goals of the school and the objectives of instruction have been met.

4.3.6. Tyler Model

Tyler Model introduced in 1949 by **Ralph Tyler** in his classic book 'Basic Principles of Curriculum and instruction'. It is one of the best known curriculum models. The Tyler Model often referred to as the 'objective model' because of its objective approach to educational evaluation. It emphasises consistency among objective, learning experiences and outcomes. Curriculum objectives indicate both behaviour to be developed and area of content to be applied. The brilliance of Tyler's model is that it was one of the first models and it was and still is a highly simple model consisting of four steps:

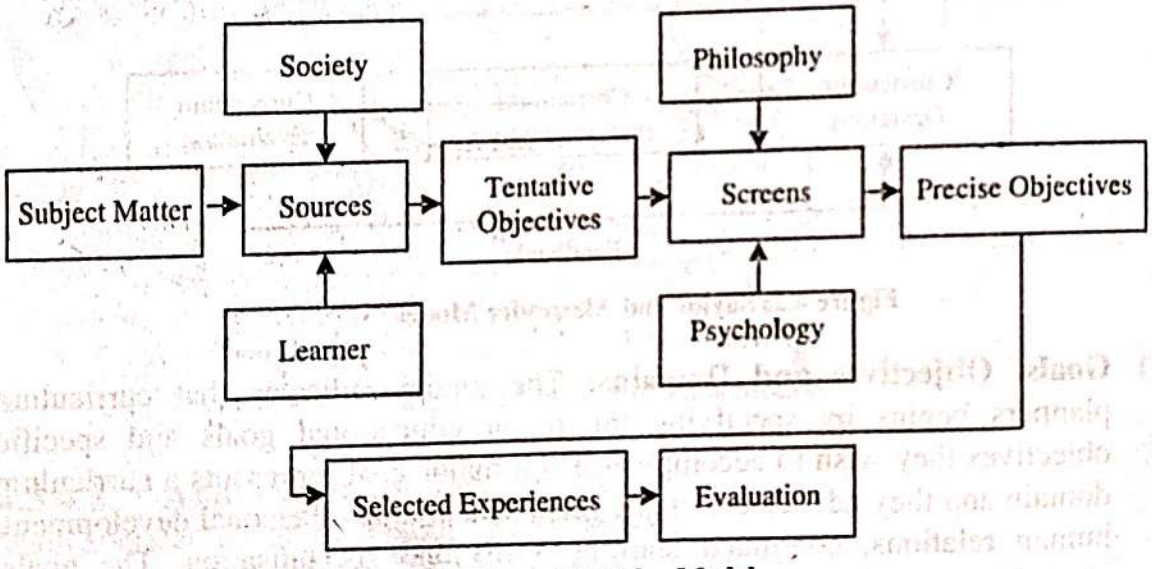


Figure 4.3: Tyler Model

1) **Determine the School's Purposes:** In Tyler model the very first step is determining the objectives of the school or class. In other words, what do the students need to do in order to be successful? Each subject has natural objectives that are indicators of mastery. All objectives need to be consistent with the philosophy of the school and this is often neglected in curriculum development. **For example,** a school that is developing an English curriculum may create an objective that students will write essays. This would be one of many objectives within the curriculum.

2) **Identify Educational Experiences Related to Purpose:** Step two is developing learning experiences that help the students to achieve step one.

For example, if students need to meet the objective of writing an essay. The learning experience might be a demonstration by the teacher of writing an essay. The students then might practice writing essays. The experience (essay demonstration and writing) is consistent with the objective (Student will write an essay).

3) **Organise the Experiences:** Step three is organising the experiences. Should the teacher demonstrate first or should the students learn by writing immediately? Either way could work and preference is determined by the philosophy of the teacher and the needs of the students. The point is that the teacher needs to determine a logical order of experiences for the students.

4) **Evaluate the Purposes:** Lastly, step four is evaluation of the objectives. Now the teacher assesses the students' ability to write an essay. There are many ways to do this. **For example,** the teacher could have the students to write an essay without his assistance. If they can do this, it is evidence that the students have achieved the objective of the lesson.

There are variations on this model. However, the Tyler model is still considered by many to be the strongest model for curriculum development.

4.4. CURRICULUM CHANGE

4.4.1. Meaning of Curriculum Change

Change is an on-going, almost unconscious process that involves reworking familiar elements into new relationship. While all changes do not lead to improvement, all improvement requires change. The ability to develop, test, and implement changes is essential for any individual, group, or organisation that wants to continuously improve. There are many kinds of changes that will lead to improvement, but these specific changes are developed from a limited number of change concepts.

Curriculum change means making the curriculum different in some way, to give it a new position or direction. This often means alteration to its philosophy by way of its aims and objectives, reviewing the content included, revising its methods and re-thinking its evaluatory procedures.

Process of curriculum change may be assisted by permissiveness and support in accordance with a helpful improvement in curriculum. At the time of curriculum change it must be necessary in consideration that resources of implementation of curriculum are available or not.

Successful curriculum development requires better use of 'change knowledge' - failure is often a result of neglecting it. Policy - makers, education leaders and teachers need to know more about the drivers of successful curriculum change in schools. Therefore, learning about educational change and its key features should become integral elements of any serious curriculum reform process.

4.4.2. Need of Curriculum Change

We are looking ahead to the future and working to ensure that provincial curriculum continues to give all students the best possible start in life and meet the demands of living in the 21st century. To ensure student success, we need our curriculum to be relevant, meaningful and engaging for all students.

A school curriculum is intended to provide children and young people with the knowledge and skills required to lead successful lives. Today, there is growing concern that the taught curriculum needs to be reconsidered and redesigned.

What is a curriculum for at this time? It comprises a challenging selection of subjects that help children and young people understand the world. It highlights skills necessary for learning throughout life, as well as for work, and for one's personal development and well-being.

The need of curriculum change is caused by following reasons:

1) People improve with greatest enthusiasm when they detect the desire of the stimulator of improvement to improve himself.
2) The direction of improvement should be determined cooperatively. People's goals differ; however, if they are to work together effectively, they must determine cooperatively the direction their efforts are to take.
3) The direction of improvement should be determined cooperatively. People's goals differ; however, if they are to work together effectively, they must determine cooperatively the direction their efforts are to take.
4) People improve through experiencing. The kind of teacher one is may be determined largely by the kinds of experiences he or she has had. School systems should seek to provide their teachers with the best of in-service education.
5) Stimulators of improvement should divide their time between contacts with individuals and contacts with groups. Research and practice show that both individual conferences and group work are effective in helping teachers improve the quality of their work.
6) Whenever possible, improvement should be induced in situations that involve problem solving. People improve most when a stimulator of improvement helps them solve their own problems.
7) Stimulators of improvement should help keep channels of communication open. Psychological static easily gets between the sender and the receiver of a message.
8) Stimulators of improvement should use their power and influence with great care. Educational leaders have largesse to distribute in the form of position, salary, approval, knowledge, prestige, disciplinary control and even affection.
9) Stimulators of improvement should operate on a limited number of fronts at a given time. Curriculum workers are learning that sweeping, comprehensive improvements rarely take place.
10) The students themselves receive little or no experience in assuming responsibilities or in making choices, and everything is decided for them by the teacher or the administrator.

4.4.3. Objectives of Curriculum Change

Following are the main objectives of curriculum change:

1) To restructure the curriculum according to the needs, interests or abilities of the learner,
2) To eliminate unnecessary units, teaching methods and contents,
3) To introduce latest and update methods of teaching and content, new knowledge and practices,
4) To add or delete number of clinical hours of instruction,
5) To correlate between the student's theory courses and clinical learning practices, and
6) To select clinical learning experiences base on the objectives rather than on the service needs of the hospital.

4.4.4. Types of Curriculum Change

Following are considered some types of curriculum change:

1) **Empirical Rational:** Stress is laid on the need for change and the competence to implement. These changes do not occur at school level as they are not capable of bringing such change.
2) **Normative Re-Educative Strategies:** It is based on the rationality and intelligence of humans. This kind of change can occur by approaching humans convincing them that there is a need to change their values, attitudes, understanding and skills.
3) **Power Strategies:** Changes should meet the expectations of the superiors – who are in a higher power. Such coerce strategies are used often in schools.

According to John Mcneil, the different types of changes are:

1) **Substitution:** In this type of change one element is substituted by the other, i.e., one course paper/one unit is replaced with another. Mostly, this kind of change is easily implemented.
2) **Alternation:** If some material, content, item or procedure is introduced into the existing material and is adopted, it is considered alteration.
3) **Perturbation:** Some changes when introduced disturb the programme for some time and then later on they get adjusted or adopted into the programme.
4) **Restructuring:** These changes lead to modification of the system itself. **For example,** team teaching, project method or competency based teaching and evaluation. This change is like restructuring.
5) **Value-Oriented Change:** This change basically brings a shift from ones philosophy or basic ideology towards a particular auricular prescription or orientation. Most of them who resist should adjust with the changes and accept the same. The teachers who cannot adjust their values to such changes may not be retained for long.

4.4.5. Stages of Curriculum Change

The three stages of curriculum change are:

1) **Initiation:** In this stage, ideas for change are launched and decisions are made regarding the nature, direction and extent of change.
2) **Legitimating:** The second stage is said to be one of legitimating, in which the sentiment on behalf of change is being communicated.
3) **Congruence:** The third stage involves congruence of the separate systems of values held by the person or persons seeking to create change and by the person or persons who are the targets or human subjects of the proposed change.

4.4.6. Factors Affecting Curriculum Change

There are various factors which are responsible for curriculum change:

1) **Explosion of Knowledge:** Humanities stored of knowledge has shown an additive increase in the past, but in recent years the growth in knowledge has been exponential. Not only has knowledge accumulated, but also there have been new ways of organising it and looking at it.
2) **Community:** There are certain key questions that should be asked about school community relationships in seeking evidence of the need for programme modifications.
3) **Society:** People conceive of the need. People will draw up plans to deal with the situation. People will carry out these plans.
4) **Socio-Political Factors:** As the states, policies change, they have an influence on the educational policies and schemes that they undertake. It also takes into consideration the social needs and demands and changing trends in the society with respect to various other issues and contemporary developments.
5) **Economic Factors:** Economic status of the people and the state play a role in the curriculum change. The aspirations of people, their demands and expectations from particular courses or curricular inclusion at various stages of education, all depend on the economic status.

4.4.7. Developing a Programme for Curriculum Change

For developing a programme for curriculum change:

1) Develop a faculty consensus as to what level of involvement your program or school should and can play in curriculum;
2) If the decision is made to proceed with necessary curriculum change, undertake a process to develop and implement this change;
3) Consider various funding possibilities;
4) Take into account changes in the regulatory environment in your and neighbouring states;
5) Consider all your constituencies that are affected by the change process;
6) External organisations can influence the curriculum innovation process;
7) Institution missions, goals, and policies have a pervasive influence on the policies and procedures in your programme; and
8) The way you organise and run the department or school can have an important effect on the innovation process.

4.5. EXERCISE

4.5.1. Very Short Answer Type Questions

1) Define curriculum change.
2) What is curriculum development?
3) Define discipline centred curriculum design.
4) Define problem centred curriculum design.
5) What are components of curriculum development?

4.5.2. Short Answer Type Questions

1) Write a short note on discipline centred curriculum design.
2) Write a short note on learner centred curriculum design.
3) Write a short note on problem centred curriculum design.
4) Write a short note on components required in curriculum development.
5) Describe factors affecting curriculum change.

4.5.3. Long Answer Type Questions

1) What are various designs of curriculum?
2) Describe meaning, need and factors affecting curriculum change.
3) What are various models of curriculum design?
4) Describe components required in curriculum development.
5) Describe Hilda Taba model of curriculum development.