

Course Title: Knowledge and Curriculum: Perspectives in Education: (Part-I)

Course Code: BED104

Course Content:

Unit .I: Knowledge , Education and Schooling

- Relationship between school and education
- Nature of knowledge: Information, Knowledge, Conception, perception.
- Schooling , Education and knowledge as visualised by different western and Indian thinkers, Vivekananda, Rabindranath Tagore, M. K.Gandhi, Sri Aurobindo, Rousseau, Froebel ,John Dewey, Paulo Freire,
- Understanding the basic assumptions about human nature society, learning and aims of Education in relation to Curriculum.

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Unit .I

Knowledge , Education and Schooling

- Relationship between school and education
- Nature of knowledge: Information, Knowledge, Conception, perception.
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Introduction of School and Education

A **school** is an institution designed for the teaching of students (or "pupils") under the direction of teachers. There are governments and also non-government schools (private schools). Private schools may be required when the government does not supply adequate, or special education. Other private schools can also be religious, such as Christian schools, hawzas, yeshivas, and others; or schools that have a higher standard of education or seek to foster other personal achievements. Schools for adults include institutions of corporate, military education and training and business schools.

In homeschooling and online schools, teaching and learning take place outside of a traditional school building.

Education is the process of facilitating learning. Knowledge, skills, values, beliefs, and habits of a group of people are transferred to other people, through storytelling, discussion, teaching, training, or research. Education frequently takes place under the guidance of educators, but learners may also educate themselves in a process called autodidactic learning. Any experience that has a formative effect on the way one thinks, feels, or acts may be considered educational.

Education is commonly and formally divided into stages such as preschool, primary school, secondary school and then college, university or apprenticeship. The methodology of teaching is called pedagogy. Although compulsory in most places up to a certain age, attendance at school often isn't, and a minority of parents chooses home-schooling, sometimes with the assistance of modern electronic educational technology (also called e-learning). Education can take place in formal or informal settings.

Relationship between School and Education

Education is much more open-ended and all-inclusive than schooling. Education knows no bounds. It can take place anywhere, whether in the shower or in the job, whether in a kitchen or on a tractor. It includes both the formal learning that takes place in schools and the whole universe of informal learning. The agents of education can range from a revered grandparent to the people debating politics on the radio, from a child to a distinguished scientist. Whereas schooling has a certain predictability, education quite often produces surprises. A chance

conversation with a stranger may lead a person to discover how little is known of other religions. People are engaged in education from infancy on. Education, then, is a very broad, inclusive term. It is a lifelong process, a process that starts long before the start of school and one that should be an integral part of one's entire life.

Schooling, on the other hand, is a specific, formalized process, whose general pattern varies little from one setting to the next. Throughout a country, children arrive at school at approximately the same time, take assigned seats, are taught by an adult, use similar textbooks, do homework, take exams, and so on. The slices of reality that are to be learned, whether they are the alphabet or an understanding of the working of government, have usually been limited by the boundaries of the subject being taught. For example, high school students know that there not likely to find out in their classes the truth about political problems in their communities or what the newest filmmakers are experimenting with. There are definite conditions surrounding the formalized process of schooling.

A) Nature of Knowledge

- 1) Information
- 2) Knowledge
- 3) Conception
- 4) Perception

- 1) Information** (shortened as **info** or **info.**) is that which informs, i.e. an answer to a question, as well as that from which knowledge and data can be derived (as data represents values attributed to parameters, and knowledge signifies understanding of real things or abstract concepts). As it regards data, the information's existence is not necessarily coupled to an observer (it exists beyond an event horizon, for example), while in the case of knowledge, the information requires a cognitive observer.

Information can be encoded into various forms for transmission and interpretation (for example, information may be encoded into a sequence of signs, or transmitted via a sequence of signals). It can also be encrypted for safe storage and communication. The concept that information is the message has different meanings in different contexts. Thus the concept of information becomes closely related to notions of constraint, communication, control, data, form, education, knowledge, meaning, understanding, mental stimuli, pattern, perception, representation, and entropy.

- 2) Knowledge:** **Knowledge** is a familiarity, awareness or understanding of someone or something, such as facts, information, descriptions, or skills, which is acquired through experience or education by perceiving, discovering, or learning. Knowledge can refer to a theoretical or practical understanding of a subject. It can be implicit (as with practical skill or expertise) or explicit (as with the theoretical understanding of a subject);

it can be more or less formal or systematic. In philosophy, the study of knowledge is called **epistemology**; the philosopher **Plato** famously defined knowledge as "**justified true belief**".

Knowledge acquisition involves complex cognitive processes: perception, communication, and reasoning; while knowledge is also said to be related to the capacity of acknowledgment in human beings.

3) Conceptual Knowledge: Knowledge is rich in relationships and understanding. It is a connected web of knowledge, a network in which the linking relationships are as prominent as the discrete bits of information. **Examples** concepts – square, square root, function, area, division, linear equation, derivative, polyhedron By definition, conceptual knowledge cannot be learned by rote. It must be learned by thoughtful, reflective learning.

4) Perception (from the Latin **perceptio, percipio**) is the organization, identification, and interpretation of sensory information in order to represent and understand the environment. All perception involves signals in the nervous system, which in turn result from physical or chemical stimulation of the sense organs. For example, vision involves light striking the retina of the eye, smell is mediated by odor molecules, and hearing involves pressure waves. Perception is not the passive receipt of these signals, but is shaped by learning, memory, expectation, and attention.

Perception can be split into two processes. Firstly processing sensory input which transforms this low-level information to higher-level information (e.g., extracts shapes for object recognition). Secondly processing which is connected with person's concept and expectations (knowledge), and selective mechanisms (attention) that influence perception.

B) Schooling, Education and Knowledge as visualized by Indian Thinkers

1) Vivekananda

The 19th century India produced a galaxy of great men who have enriched our national life by their talent and personality. **Swami Vivekananda** was one of them.

Vivekananda **believed** in essential unity of man and God.

- He was an eclectic educationalist too.
- He tried to unite Indian spirituality and western materialism.
- He desired happy mingling or fusion of the two.
- He also wanted to unite Para Vidya and Apra Vidya.
- He was revolutionary in the field of education and touched every aspect of it.

- His ideas on various aspects of education are more relevant and are needed more today than probably during his life time.

Defining Education Swamiji who describes religion as **‘the manifestation of the divinity already in man’** defines education as **‘the manifestation of the perfection already in man’**.

Knowledge

First of all, the word **‘manifestation’** implies that something already exists and is waiting to be expressed. The main focus in learning is to make the hidden ability of a learner manifest. According to **him**, knowledge is inherent in man, not acquired from external sources. Like sparks in a flint, knowledge is potentially there in human mind. The stimulus of education causes the friction that ignites the fire of knowledge. It is the unfolding of the petals of one’s own mind. **‘Manifestation’** indicates spontaneous growth, provided that the impediments, if any, are removed.

Vivekananda said “what a man learns is really what he ‘discovers’, by taking the cover off his own soul, which is a mine of infinite knowledge”.

Education

Swami Vivekananda also **defines education** as “life-building, man-making, character-making assimilation of ideas”, and not a certain “amount of information that is put into your brain and runs riot there, undigested all your life”.

Education is not mere book-learning, nor passing examinations, not even delivering impressive lectures. It is an ability to think originally, to stand on your own feet mentally as well as practically, interacting with people successfully. Education for **him** means that process by which character is formed, strength of mind is increased, and intellect is sharpened, as a result of which one can stand on one’s own feet. **Thus, according to Vivekananda, education is the discovery of the inner self i.e. self revelation.** It is not an imposition on the individual of certain borrowed ideas from the external sources, but a natural process of enfoldment of all the inherent powers which lie in dormant condition in an individual. Education is development from within.

Vivekananda is skeptical about the system of education where the learner’s mind gets jam-packed with information without having any space for independent thinking. He clears up all confusing misconception in this regard with a witty remark: “If education is identical with information, the libraries are the greatest sages of the world. Regrettably, turning our back upon the instruction of this great master even today we treat innocent learners as nothing better than vessel to be stuffed with cartload of facts with little scope for exploring their hidden potentials. The **Objectives** of Education Vivekananda points out that the defect of the present-day education is that it has no definite goal to pursue.

Swamiji attempts to establish, through his words and deeds, that the end of all education is man-making. He prepares the scheme of this man-making education in the light of his over-all

philosophy of Vedanta. According to Vedanta, the essence of man lies in his soul, which he possesses in addition to his body and mind. In true with this philosophy, Swamiji defines education as 'the manifestation of the perfection already in man.' The aim of education is to manifest in our lives the perfection, which is the very nature of our inner self. This perfection is the realization of the infinite power which resides in everything and every-where-existence, consciousness and bliss (Satchindananda). After understanding the essential nature of this perfection, we should identify it with our inner self. For achieving this, one will have to eliminate one's ego, ignorance and all other false identification, which stand in the way. **Education he maintains** should help people to build up self-confidence and self reliance, based on balanced human relationships. **The ultimate goal of all educational effort is to strive towards character development characterized by the development of will-power, leading to courage, stamina and fearlessness.** Through education the individual should develop adaptability and able to meet the challenge of a changing society and this can be able through education and training that he or she receives from his parents and teachers. Education should lead to a feeling of brotherhood and the unity of mankind.

Schooling

According to **Swami Vivekananda, work is worship**, so to serve the masses is to serve God, so education should lead us to recognize this and to fulfill this end. Education should lead us to acquire the spirit of renunciation. Method of Teaching Having analysed the goal or objective of education, the next question that naturally arises is about the method of imparting education. According to him, knowledge is inherent in every man's soul. What we mean when we say that a man 'knows' is only what he 'discovers' by taking the cover off his own soul. Consequently, he draws our attention to the fact that the task of the teacher is only to help the child to manifest its knowledge by removing the obstacles in its way.

To drive his point home, he refers to the growth of a plant. Just as in the case of a plant, one cannot do anything more than supplying it with water, air and manure while it grows from within its own nature, so is the case with a human child. Vivekananda's method of education resembles the **heuristic method** of the modern educationists. In this system, the teacher invokes the spirit of inquiry in the pupil who is supposed to find out things for himself under the bias-free guidance of the teacher. Anticipating the much acclaimed modern, studentcentred method of learning where the teacher plays the role of a facilitator. **Vivekananda asks the teacher to come down to the level of the learner and 'give him a push upwards'.**

'No one can teach anybody. The teacher spoils everything by thinking that he is teacher'

It is true that today's education does not produce properly developed personalities having faith, hope, confidence, motivating power, balanced outlook on life, conscious of their rights as well as their duties. The reason does not lie with the youth or with their mind as such as but with the

agencies responsible for moulding a person's character—parents, teachers, social conditions in which he/she grows, and the system of education to which we trust his/ her future.

The teacher should share with the student the conviction that they are both truly one in Spirit – at the same time cultivating in the student a feeling of dignity and self-respect". As Vivekananda said "The only true teacher is he who can immediately come down to the level of the student, and transfer his soul to the student's soul and see through the student's eyes and hear through his ears and understand through his mind. Such a teacher can really teach and none else". The ideal of all education or training is to make the mind grow. Knowledge exists in the mind, like fire in a piece of flint. Friction brings it out. Swami Vivekananda believed that "Education is the manifestation of the perfection already in man" therefore, a teacher's job is only to remove obstruction from the pupil's path. What we call learning is actually 'unfolding' or 'unveiling'. Each of us is naturally growing and developing according to our own nature

He states it emphatically that if society is to be reformed, education has to reach everyone-high and low, because individuals are the very constituents of society. The sense of dignity rises in man when he becomes conscious of his inner spirit, and that is the very purpose of education. He strives to harmonize the traditional values of India with the new values brought through the progress of science and technology. It is in the transformation of man through moral and spiritual education that he finds the solution for all social evils. Founding education on the firm ground of our own philosophy and culture, he shows the best of remedies for today's social and global illness. Through his scheme of education, he tries to materialize the moral and spiritual welfare and upliftment of humanity, irrespective of caste, creed, nationality or time. However, Swami Vivekananda's scheme of education, through which he wanted to build up a strong nation that will lead the world towards peace and harmony, is still a far cry. It is high time that we give serious thought to his philosophy of education and remembers his call to everybody – 'Arise, awake and stop not till the goal is reached'.

4) Rabindranath Tagore



As one of the earliest educators to think in terms of the global village, Rabindranath Tagore's educational model has a unique sensitivity and aptness for education within multi-racial, multi-

lingual and multi-cultural situations, amidst conditions of acknowledged economic discrepancy and political imbalance.

Rabindranath Tagore (1861-1941), Asia's first Nobel Laureate, was born into a prominent Calcutta family known for its socio-religious and cultural innovations during the 19th Bengal Renaissance. The profound social and cultural involvement of his family would later play a strong role in the formulation of Rabindranath's educational priorities. His grandfather Dwarkanath was involved in supporting medical facilities, educational institutions and the arts, and he fought for religious and social reform and the establishment of a free press. His father was also a leader in social and religious reform, who encouraged a multi-cultural exchange in the family mansion Jorasanko. Within the joint family, Rabindranath's thirteen brothers and sisters were mathematicians, journalists, novelists, musicians, artists. His cousins, who shared the family mansion, were leaders in theatre, science and a new art movement. The tremendous excitement and cultural richness of his extended family permitted young Rabindranath to absorb and learn subconsciously at his own pace, giving him a dynamic open model of education, which he later tried to recreate in his school at Santiniketan. Not surprisingly, he found his outside formal schooling to be inferior and boring and, after a brief exposure to several schools, he refused to attend school. The only degrees he ever received were honorary ones bestowed late in life.

Knowledge

Rabindranath did not write a central educational treatise, and his ideas must be gleaned through his various writings and educational experiments at Santiniketan. In general, he envisioned an education that was deeply rooted in one's immediate surroundings but connected to the cultures of the wider world, predicated upon pleasurable learning and individualized to the personality of the child. He felt that a curriculum should revolve organically around nature with classes held in the open air under the trees to provide for a spontaneous appreciation of the fluidity of the plant and animal kingdoms, and seasonal changes. Children sat on hand-woven mats beneath the trees, which they were allowed to climb and run beneath between classes. Nature walks and excursions were a part of the curriculum and students were encouraged to follow the life cycles of insects, birds and plants. Class schedules were made flexible to allow for shifts in the weather or special attention to natural phenomena, and seasonal festivals were created for the children by Tagore. In an essay entitled "A Poet's School," he emphasizes the importance of an empathetic sense of interconnectedness with the surrounding world.

Education

We have come to this world to accept it, not merely to know it. We may become powerful by knowledge, but we attain fullness by sympathy. The highest education is that which does not merely give us information but makes our life in harmony with all existence. But we find that this education of sympathy is not only systematically ignored in schools, but it is severely repressed. From our very childhood habits are formed and knowledge is imparted in such a manner that our life is weaned away from nature and our mind and the world are set in opposition from the beginning of our days. Thus the greatest of educations for which we came prepared is neglected, and we are made to lose our world to find a bagful of information instead. We rob the child of his earth to teach him geography, of language to teach him grammar. **His hunger is for the Epic, but he is supplied with chronicles of facts and date.**

In Tagore's philosophy of education, the aesthetic development of the senses was as important as the intellectual—if not more so—and music, literature, art, dance and drama were given great prominence in the daily life of the school. Try to create an atmosphere in which the arts would become instinctive. One of the first areas to be emphasized was music.

In keeping with his theory of subconscious learning, Rabindranath never talked or wrote down to the students, but rather involved them with whatever he was writing or composing. The students were allowed access to the room where he read his new writings to teachers and critics, and they were encouraged to read out their own writings in special literary evenings. In teaching also he believed in presenting difficult levels of literature, which the students might not fully grasp, but which would stimulate them. The writing and publishing of periodicals had always been an important aspect of Jorasanko life, and students at **Santiniketan** were encouraged to create their own publications and put out several illustrated magazines. The children were encouraged to follow their ideas in painting and drawing and to draw inspiration from the many visiting artists and writers.

To encourage mutuality, Rabindranath invited artists and scholars from other parts of India and the world to live together at Santiniketan on a daily basis to share their cultures with Visva-Bharati. The Constitution designated Visva-Bharati as an Indian, Eastern and Global cultural centre whose goals were:

1. To study the mind of Man in its realization of different aspects of truth from diverse points of view.
2. To bring into more intimate relation with one another through patient study and research, the different cultures of the East on the basis of their underlying unity.

3. To approach the West from the standpoint of such a unity of the life and thought of Asia.
4. To seek to realize in a common fellowship of study the meeting of East and West and thus ultimately to strengthen the fundamental conditions of world peace through the free communication of ideas between the two hemispheres.
5. And with such Ideals in view to provide at Santiniketan a centre of culture where research into the study of the religion, literature, history, science and art of Hindu, Buddhist, Jain, Zoroastrian, Islamic, Sikh, Christian and other civilizations may be pursued along with the culture of the West, with that simplicity of externals which is necessary for true spiritual realization, in amity, good-fellowship and co-operation between the thinkers and scholars of both Eastern and Western countries, free from all antagonisms of race, nationality, creed or caste and in the name of the One Supreme Being who is Shantam, Shivam, Advaitam.

Schooling

In terms of curriculum, he advocated a different emphasis in teaching. Rather than studying national cultures for the wars won and cultural dominance imposed, he advocated a teaching system that analysed history and culture for the progress that had been made in breaking down social and religious barriers. Such an approach emphasized the innovations that had been made in integrating individuals of diverse backgrounds into a larger framework, and in devising the economic policies which emphasized social justice and narrowed the gap between rich and poor. Art would be studied for its role in furthering the aesthetic imagination and expressing universal themes.

It should be noted that Rabindranath in his own person was a living icon of the type of mutuality and creative exchange that he advocated. **His vision of culture was not a static one, but one that advocated new cultural fusions, and he fought for a world where multiple voices were encouraged to interact with one another and to reconcile differences within an overriding commitment to peace and mutual interconnectedness.** His generous personality and his striving to break down barriers of all sorts gives us a model for the way multiculturalism can exist within a single human personality, and the type of individual which the educational process should be aspiring towards.

5) M.K.Gandhi

Schooling, Education and Knowledge (Basic Education)

Mahatma Gandhi explained the concept of Basic Education through a series of articles in his Harijan magazine in 1937. In the conference at Wardha after a detailed discussion about Gandhiji's articles the scheme of Basic Education took shape under the leadership of Dr. Zakir Hussain. The following four resolutions were passed.

- (i) Free and compulsory education should be given to all children for a period of seven years.
- (ii) The medium of instruction should be the mother tongue,
- (iii) The process of education should be centred round some form of manual production work in the shape of a craft.

Merits of Basic Education

(1) Work as a central place:

Since work occupies a central place in life, it had an important place in Basic Education. Dignity of labour was emphasized by him and work was made an integral part of this education.

(2) A new method of teaching:

Through Basic Education Gandhiji introduced a new method of teaching. This method is to teach all subjects through crafts and taken as activity-centered meant to free children from tyranny of words and cramming.

(3) Self-supporting education:

As a corollary to craft-centered education, it was visualized by Gandhiji that schools need be self-supporting. The crafts organized scientifically would result in more production and the sale-proceeds must fetch a good income.

(4) Socially sound system of education:

Basic education was sound sociologically. The then class-labor and chasm between mental and physical labor and the spirit of dependence on others were required to be removed from the society. In short, Basic education was intended to eradicate many ills of the society.

(5) Training for Citizenship:

Basic education was providing for training students in democratic living and practices. It was aiming at forming positive attitudes, creating interests and appreciation, developing understanding and imparting skills in citizenship. On the whole, it was a training citizenship.

Drawbacks in Basic Education

(1) Selection of Crafts:

Since craft was occupying an important place in Basic school curriculum, selection of a suitable craft was determining the success and efficiency of Basic Education. But most of the schools followed the trodden path or stereotyped process without bothering for the local conditions and

needs. For example, in the areas where cotton was not grown and had to be brought from a long distance, weaving was introduced as a craft even in those areas.

(2) The Principles of Correlation:

In Basic schools every subject was being taught through a craft. The principle of correlation was tried to be adopted in all subjects, but in real situation it was done as a ritual without any sincerity or seriousness. In fact, correlation was a slogan and fiction.

(3) The Idealism of self-sufficiency:

It was complained that the schools cannot be made self-sufficient with the production by children. The concept of self-sufficiency was thought to be idealism and was not emphasized by most of the teachers and inspecting officers. Products by unskilled hands were not selling well and fetching adequate income. Rather Basic Schools were more expensive than traditional schools.

(4) The Principles of Equality:

Although Basic Education was visualized to be socially sound for removing the existing disparities, it was rather aggravating the situation. It was tending to be meant for the children of poor laborers and farmers only and children of high class families were not going to these schools. The gulf between poor and rich classes rather widened due to Basic Education.

(5) Proper Orientation and Understanding:

Basic schools called for highly qualified and well-equipped teachers for properly teaching subjects through correlation and organizing crafts with efficiency. But in fact many teachers employed in such schools were lacking proper understanding of the Basic Education principles and desired orientation with the idealism or values impregnated in the system.

6) Sri Aurobindo

Education

“The supreme truths are neither the rigid conclusions of logical reasoning nor the affirmations of creedal statement, but fruits of the soul’s inner experience.”

- Sri Aurobindo

Introduction

Aurobindo Ghosh was an Idealistic to the core. His Idealistic philosophy of life was based upon Vedantic philosophy of Upanishad. He maintains that the kind of education, we need in our country, is an education “proper to the Indian soul and need and temperament and culture that we are in quest of, not indeed something faithful merely to the past, but to the developing soul of India, to her future need, to the greatness of her coming-self creation, to her eternal spirit.”

Sri Aurobindo's (1956) concept of 'education' is not only acquiring information, but "the acquiring of various kinds of information", he points out, "is only one and not the chief of the means and necessities of education: its central aim is the building of the powers of the human mind and spirit".

Aurobindo's Aims of Education

- Sri Aurobindo emphasized that education should be in accordance with the needs of our real modern life. In other words, education should create dynamic citizen so that they are able to meet the needs of modern complex life.
- According to him, physical development and holiness are the chief aims of education. As such, he not only emphasized mere physical development, but physical purity also without which no spiritual development is possible. In this sense physical development and purification are the two bases on which the spiritual development is built.
- The second important aim of education is to train all the senses hearing, speaking, and listening, touching, smelling and tasting. According to him these senses can be fully trained when nerve, chitta and manas are pure. Hence, through education purity of senses is to be achieved before any development is possible.
- The third aim of education is to achieve mental development of the child. This mental development means the enhancement of all mental faculties' namely-memory, thinking, reasoning, imagination, and discrimination etc. education should develop them fully and harmoniously.
- Another important aim of education is the development of morality. Shri Aurobindo has emphasized that without moral and emotional development only, mental development becomes harmful to human process. Heart of a child should be so developed as to show extreme love, sympathy and consideration for all living beings. This is real moral development. Thus, the teacher should be a role model to his children that mere imitation can enable them to reach higher and higher stages of development. Development of conscience is another important aim of education that needs to develop by the help of teacher. Conscience has four level chitta, manas, intelligence, and knowledge.
- Aurobindo emphasized that the main aim of education is to promote spiritual development. According to him every human being has some fragment of divine existence within himself and education can scan it from each individual with its full extent.

Knowledge

Aurobindo prescribed free environment for the child to develop all his latent faculties to the maximum and suggested all those subjects and activities should possess elements of creativity and educational expression. He wished to infuse a new life and spirit into each subject and activity through which the development of super human being could become possible. He laid down the following principle for curriculum-

- Curriculum should be in such a way which child finds as interesting.
- It should include those entire subjects which promote mental and spiritual development.
- It should motivate children towards the attainment of knowledge of the whole world.
- It should contain creativity of life and constructive capacities

Aurobindo describes **curriculum for different stages of education**—

- Mother tongue, English, French, literature, national history, art, painting, general science, social studies and arithmetic should be taught at **primary stage**.
- Mother tongue, English, French, literature, arithmetic, art, chemistry, physics, botany, physiology, health education, social studies at **secondary stage**.
- Indian and western philosophy, history of civilization, English literature, French, sociology, psychology, history, chemistry, physics, botany at **university level**.
- Art, painting, photography, sculptural, drawing, type, cottage-industries, mechanical and electrical engineering, nursing etc at **vocational level**

Teacher-Taught Relationship

Aurobindo enunciates certain sound principles of good teaching, which have to be kept in mind when actually engaged in the process of learning. According to Sri Aurobindo, the first principle of true teaching is “that nothing can be taught.” He explains that the knowledge is already dormant within the child and for this reason. The teacher is not an instructor or task-master; “he is a helper and a guide.” The role of the teacher “is to suggest and not to impose”. He does not actually train the pupil’s mind, he only shows him how to perfect the instruments of knowledge and helps him and encourages him in the process. He does not impart knowledge to him; he shows him how to acquire knowledge for himself. He does not call forth the knowledge that is within; he only shows him where it lies and how it can be habituated to rise to the surface.

Schooling

Sri Aurobindo’s philosophy of education aims at modifying the school curricula, maximizing the learning modalities, helping the child to achieve his potentiality at his own pace and level and devote his time to discover himself. This kind of schooling is seen as an anti-thesis of an imposed uniformity of prescribed courses and teaching which the traditional schools purport to do and can be linked to what was taught in schools under the colonial rule. The type of schooling

visualised by Sri Aurobindo is seen as aiming to bridge the gap between the child's life at school and that at home.

In contrast to the educational ideas of Sri Aurobindo , the present day education system in India is purely an instruction-of-information enterprise, supported by a subject-time-bound curriculum, which neither relates to the needs or abilities of the learner nor takes into consideration the way children learn successfully. Instead of being child-oriented it is subject-oriented. The schools focus on competition with others, mastery of subject matter for getting better marks or grades than on learning in cooperation with and from one another for personal growth and for welfare of others.

This is not exclusive to Indian phenomenon, rather all over the world education is largely reductionist, materialist, ego enforcing, and devoid of the joys of the spirit. It is in this context that there is a need to examine initiatives which are rooted in Indian tradition, seek alternatives in curriculum teaching and learning for measuring success, involve children in the process of learning and focus on learning from the another and not from an authoritative pedagogue.

Discipline

Children should be provided with a free environment so that they are able to gain more and more knowledge by their own efforts. According to him any retrained and imposed environment stunt the growth and natural development. Aurobindo propagated the concept of self discipline which was the cure of impressionistic discipline.

Schooling, Education and Knowledge as visualized by Western Thinkers

1) Rousseau

Schooling, Education and Knowledge

“Correct education disposes the child to take the path that will lead him to truth when he has reached the age to understand it and to goodness when he has acquired the faculty of recognizing and loving it”.

– Rousseau

Through all the centuries the theory and practice of education had been determined from the standpoint of adult interest and adult social life. No one had dreamed there could be any other point of view from which to approach the training of the young. Rousseau boldly assailed this basic assumption as not only utterly false but absolutely harmful. In place of the ideas and views

of adults, he substituted the needs and activities of the child and the natural course of development. **“No change could have been more revolutionary”.**

Education had been conceived as a process by which the child must acquire certain habits, skills, attitudes, and a body of knowledge which civilization had handed down. It was the task of the school to transfer these unchanged to each new generation. On the one hand, the stability of society depended on the success of the transfer; on the other, the success of the individual depended on acquiring them. The fact that children are imitative, that the retentive power of memory is strongest in childhood, that they have a 14 extraordinary ability to acquire language apart from the ideas symbolized – all these have conspired to mislead pedagogy.

It was the great service of Rousseau to abolish this false system of education. His supreme contribution lay in making the child the centre from which education must be viewed. Teaching and training consist, not in inculcating ideas, but in furnishing the child with opportunities for the functioning of those activities that are natural for each stage. Another problem was that the interests of society were placed above those of the individual. The child was trained to conform to the existing society. The individual was sacrificed to the whims of society. This is what angered Rousseau, who believed that the goodness and happiness of the individual are more essential than the development of his talent for social service. Thus in setting the needs of the individual above those organized society, Rousseau reversed the universal order. The heart of his educational theory is the study of nature of the child. His principle involved understanding what nature itself is developing in the child.

1) It can to some extent be emphasized, that the ultimate aim of Rousseau was **the preservation of the natural goodness**, and virtues of the heart, and of society which was in harmony with them. In the physical world he observed order, harmony, and beauty; but in the world of man he observed infinite conflict, ugliness, selfishness, which finally resulted in plenty of misery. It was exactly this contrast between the world of nature and the world of man that led to evils in society and to the education given to the young. “The supreme end to be attained is a society in which the noble, primitive virtues – courage, endurance, temperance, equality, fraternity, simplicity and liberty – are realized

2) **Individuality the problem of education:** The recognition and the liberation of the individual in the modern world came slowly. The first significant expression appeared at the time of the Renaissance. It was confined to the gifted and the aristocratic classes, and, even then, only the personal and artistic aspects of the person were involved. This remarkable display of individual expression in art, scholarship, and literature quickly gave place to an imitative formalism.

3) **General versus specialized education:** In the beginning, education aimed to produce the gentleman-scholar to serve the church and the state. This involved the specialization of the powers of the individual and his subjection to others. Rousseau saw in this a direct threat against the fundamental integrity of the person. In making a citizen or a laborer, education made him or her less a person. It was a choice between the natural individual and the distortion of his or her original nature. Thus in opposition to the educational aims of the past, Rousseau was trying to establish a generous and liberal cultivation of the native endowments of the child. The child ought to be developed as a whole, before the cramping moulds of specialization distort its being. Education according to him was meant to fit a person for a changing environment and a changing fortune. Therefore the child should not be trained for a definite vocation or a definite social position. The variation of individuals in wealth and station makes such training for a single position extremely dangerous. Rousseau drew attention to the fact that society itself is always changing and that man is not a creature fixed and unalterable, because human nature is still in the process of development.

4) **The educational institution:** What institution shall train a child? Is education a public or a family function? These were some of the doubts that were raised during Rousseau's time. For Rousseau both were important depending on the needs involved. Both systems were designed to preserve those fundamental virtues which constituted the supreme end of life and the chief good of the state. "They are both cooperating factors in a small state, and through both the common life, habits, and sentiments are communicated to the young. Both unite in developing equality, fraternity, simplicity, liberty, and all the other virtues."

2) Froebel's Kindergarten



Kindergarten was the first organized early-childhood educational method. As a keen observer of nature and humanity, Froebel approached human education from both a biological

and a spiritual perspective. Froebel discovered that brain development is most dramatic between birth and age three, and recognized the importance of beginning education earlier than was then practiced. The number of innovations that Froebel pioneered through his research is startling, and includes multiple intelligences (different learning styles), play-based, child-centered, holistic education, parent involvement/training, educational paper folding, and use of music, games, and movement activities for education.

Schooling, Education and Knowledge

1) Humans Are Creative Beings

From a spiritual perspective, Froebel understood that what separates us from other life forms is that we alter our environment. More than simple tool-building, our brains allow us to visualize in 3-D and imagine a different future. True education therefore must help children to understand their role as creative beings.

2) Play Is the Engine of Real Learning

Froebel concluded that play is not idle behavior but a biological imperative to discover how things work. It is pleasurable activity, but biologically purposeful. Froebel sought to harness this impulse and focus child's play energy on specific activities designed to lead them to create meaning from their experiences

3) John Dewey

Schooling, Education and Knowledge

The ideas of democracy and social reform are continually discussed in Dewey's writings on education. Dewey makes a strong case for the importance of education not only as a place to gain content knowledge, but also as a place to learn how to live. In his eyes, **the purpose of education** should not revolve around the acquisition of a pre-determined set of skills, but rather the realization of one's full potential and the ability to use those skills for the greater good. He notes that **"to prepare him for the future life means to give him command of himself;** it means so to train him that he will have the full and ready use of all his capacities"

In addition to helping students realize their full potential, Dewey goes on to acknowledge that education and schooling are instrumental in creating social change and reform. He notes that **"education is a regulation of the process of coming to share in the social consciousness; and that the adjustment of individual activity on the basis of this social consciousness is the only sure method of social reconstruction"**.

Classrooms: Dewey discusses two major conflicting schools of thought regarding educational pedagogy.

- The first is centered on the curriculum and focuses almost solely on the subject matter to be taught. Dewey argues that the major flaw in this methodology is the inactivity of the student; within this particular framework, "the child is simply the immature being who is

to be matured; he is the superficial being who is to be deepened". He argues that in order for education to be most effective, content must be presented in a way that allows the student to relate the information to prior experiences, thus deepening the connection with this new knowledge. At the same time, Dewey was alarmed by many of the "child-centered" excesses of educational-school pedagogues who claimed to be his followers, and he argued that too much reliance on the child could be equally detrimental to the learning process.

- In this second school of thought, "we must take our stand with the child and our departure from him. It is he and not the subject-matter which determines both quality and quantity of learning" According to Dewey, the potential flaw in this line of thinking is that it minimizes the importance of the content as well as the role of the teacher.

Knowledge: For Dewey and his philosophical followers, education stifles individual autonomy when learners are taught that knowledge is transmitted in one direction, from the expert to the learner. Dewey not only re-imagined the way that the learning process should take place, but also the role that the teacher should play within that process. For Dewey, "The thing needful is improvement of education, not simply by turning out teachers who can do better the things that are not necessary to do, but rather by changing the conception of what constitutes education". Dewey's qualifications for teaching—a natural love for working with young children, a natural propensity to inquire about the subjects, methods and other social issues related to the profession, and a desire to share this acquired knowledge with others—are not a set of outwardly displayed mechanical skills. Rather, they may be viewed as internalized principles or habits which "work automatically, unconsciously".

Professionalization of teaching as a social service

For many, education's purpose is to train students for work by providing the student with a limited set of skills and information to do a particular job. As Dewey notes, this limited vocational view is also applied to teacher training schools who attempt to quickly produce proficient and practical teachers with a limited set of instructional and discipline skills needed to meet the needs of the employer and demands of the workforce. For Dewey, the school and the classroom teacher, as a workforce and provider of a social service, have a unique responsibility to produce psychological and social goods that will lead to both present and future social progress. As Dewey notes, **"The business of the teacher is to produce a higher standard of intelligence in the community, and the object of the public school system is to make as large as possible the number of those who possess this intelligence.** Skill, ability to act wisely and effectively in a great variety of occupations and situations, is a sign and a criterion of the degree of civilization that a society has reached. It is the business of teachers to help in producing the many kinds of skill needed in contemporary life. If teachers are up to their work, they also aid in production of character.

According to Dewey, the emphasis is placed on producing these attributes in children for use in their contemporary life because it is “impossible to foretell definitely just what civilization will be twenty years from now”. However, although Dewey is steadfast in his beliefs that education serves an immediate purpose. He is not ignorant of the impact imparting these qualities of intelligence, skill and character on young children in their present life will have on the future society.

4) Paulo Freire

Schooling, Education and Knowledge

1. Theory of Value: What knowledge and skills are worthwhile learning? What are the goals of education?

Education should raise the awareness of the students so that they become subjects, rather than objects, of the world. This is done by teaching students to think democratically and to continually question and make meaning from (critically view) everything they learn.

Our relationship with the learners demands that we respect them and demands equally that we be aware of the concrete conditions of their world, the conditions that shape them. To try to know the reality that our students live is a task that the educational practice imposes on us: Without this, we have no access ' to the way they think, so only with great difficulty can we perceive what and how they know. There are no themes or values of which one cannot speak any areas in which one must be silent. We can talk about everything, and we can give testimony about everything.

2. Theory of Knowledge: What is knowledge? How is it different from belief? What is a mistake? What is a lie?

Knowledge is a social construct.

Knowing is a social process, whose individual dimension, however, cannot be forgotten or even devalued. The process of knowing, which involves the whole conscious self, feelings, emotions, memory, affects, an epistemologically curious mind, focused on the object, equally involves other thinking subjects, that is, others also capable of knowing and curious. This simply means that the relationship called "thinking" is not enclosed in a relationship "thinking subject - knowable object" because it extends to other thinking subjects.

Freire discusses two types of knowledge, unconscious, sometimes practical knowledge and critical, reflective or theory knowledge. Beliefs are shaped into knowledge by discussion and critical reflection.

In the first moment, that of the experience of and in daily living, my conscious self is exposing itself to facts, to deeds, without, nevertheless, asking itself about them, without looking for their "reason for being." I repeat that the knowing because there also is knowing that results from these involvements is that made from pure experience. In the second moment, in which our minds work epistemologically, the methodological rigor with which we come closer to the object, having "distanced ourselves" from it, that is, having objectified it, offers us another kind of knowing, a knowing whose exactitude gives to the investigator or the thinking subject a margin of security that does not exist in the first kind of knowing, that of common sense.

While I didn't find discussion about the meaning of the word "mistake", Paulo does talk at length that it is wrong to accept one side of any dichotomy. Knowledge should not be limited to logic and content, or emotions and superstitions, but should seek the connections between understandings and feelings.

3. Theory of Human Nature: What is a human being? How does it differ from other species? What are the limits of human potential?

The ability of humans to plan and shape the world for their future needs is what separates man from animals. The oppressed majority must be taught to imagine a better way so that they can shape their future and thereby become more human.

Growing to us is something more than growing to the trees or the animals that, unlike us, cannot take their own growth as an object of their preoccupation. For us, growing is a process in which we can intervene. The point of decision of human growth is not found in the species. We are the only beings capable of being both the objects and the subjects of the relationships that we weave with others and with the history that we make and that makes and remakes us. Between us and the world, relationships can be critically, naively, or magically perceived, but we are aware of these relationships to an extent that does not exist between any other living being and the world. Because we are "programmed to learn," we live, or experience or we find ourselves open to experience the relationship between what we inherit and what we acquire. We become genetic-cultural beings. We are not only nature, nor are we only culture, education, and thinking.

4. Theory of Learning: What is learning? How are skills and knowledge acquired?

Freire talks about the fallacy of looking at the education system like a bank, a large repository where students come to withdraw the knowledge they need for life. Knowledge is not a set commodity that is passed from the teachers to the students. Students must construct knowledge from knowledge they already possess. Teachers must learn how the students understand the world so that the teacher understands how the student can learn.

Teaching cannot be a process of transference of knowledge from the one teaching to the learner. This is the mechanical transference from which results machinelike memorization, which I have already criticized. Critical study correlates with teaching that is equally critical, which necessarily demands a critical way of comprehending and of realizing the reading of the word and that of the world, the reading of text and of context. Learning is a process where knowledge is presented to us, then shaped through understanding, discussion and reflection.

When I understand an object, rather than memorizing the profile of the concept of the object, I know that object, I produce the knowledge of that object. When the reader critically achieves an understanding of the object that the author talks about, the reader knows the meaning of the text and becomes coauthor of that meaning. The reader then will not speak of the meaning of, the text merely as someone who has heard about it. The reader has worked and reworked the meaning of the text; thus, it was not there, immobilized, waiting. Here lies the difficulty and the fascination in the act of reading.

5. Theory of Transmission: Who is to teach? By what methods? What will the curriculum be?

Teaching is a political process. It must be a democratic process to avoid teaching authority dependence. The teacher must learn about (and from) the student so that knowledge can be constructed in ways that are meaningful to the student. The teachers must become learners and the learners must become teachers.

Only insofar as learners become thinking subjects, and recognize that they are as much thinking subjects as are the teachers, is it possible for the learners to become productive subjects of the meaning or knowledge of the object. It is in this dialectic movement that teaching and learning become knowing and reknowing. The learners gradually know what they did not yet know, and the educators reknow what they knew before. To think that such work can be realized when the theoretical context is separated in such a way from the learners' concrete experiences is only possible for one who judges that the content is taught without reference to and independently from what the learners already know from their experiences prior to entering school. Content cannot be taught, except in an authoritarian, vanguardist way, as if it was a set of things, pieces of knowledge, that can be superimposed on or juxtaposed to the conscious body of the learners. Teaching, learning, and knowing have nothing to do with this mechanistic practice.

Educators need to know what happens in the world of the children with whom they work. They need to know the universe of their dreams, the language with which they skillfully defend themselves from the aggressiveness of their world, what they know independently of the school, and how they know it. The democratic school that we need is not one in which only the teacher teaches, in which only the student learns, and in which the principal is the all powerful commander.

Teachers must have humility, coupled with love and respect for their students.

6. Theory of Society: What is society? What institutions are involved in the educational process?

Freire challenges the conventional assumption that there is equal opportunity in a democratic society. He asserts, often, that education is a political process. Schools become tools that are used by parents, business and the community to impose their values and beliefs. While no intentional harm is intended, this process often results in the oppression of less privileged persons.

It is truly difficult to make a democracy. Democracy, like any dream, is not made with spiritual words but with reflection and practice. It is not what I say that says I am a democrat, that I am not racist or machista but what I do. What I say must not be contradicted by what I do. It is what I do that bespeaks my faithfulness or not to what I say. As one might expect, authoritarianism will at times cause children and students to adopt rebellious positions, defiant of any limit, discipline, or authority. But it will also lead to apathy, excessive obedience, and uncritical conformity, lack of resistance against authoritarian discourse, self-abnegation, and fear of freedom. There are moments in which the teacher, as the authority talks to the learners, says what must be done, establishes limits without which the very freedom of learners is lost in lawlessness, but these moments, in accordance with the political options of the educator, are alternated with others in which the educator speaks with the learner.

It doesn't hurt to repeat here the statement, still rejected by many people in spite of its obviousness, that education is a political act. No one can learn tolerance in a climate of irresponsibility, which does not produce democracy. The act of tolerating requires a climate in which limits may be established, in which there is principles to be respected. That is why tolerance is not coexistence with the intolerable. Under an authoritarian regime, in which authority is abused, or a permissive one, in which freedom is not limited, one can hardly learn tolerance. Tolerance requires respect, discipline, and ethics. Being tolerant does not mean acquiescing to the intolerable; it does not mean covering up disrespect; it does not mean coddling the aggressor or disguising aggression. Tolerance is the virtue that teaches us to live with the different. It teaches us to learn from and respect the different.

7. Theory of Opportunity: Who is to be educated? Who is to be schooled?

Freire's entire education career is based on his desire to provide greater opportunity for the poor and oppressed people of the world, but particularly in Brazil.

Knowing has everything to do with growing. But the knowing of dominant minorities absolutely must not prohibit, must not asphyxiate, and must not castrate the growing of the immense dominated majorities. Citizenship implies freedom -- to work, to eat, to dress, to wear shoes, to sleep in a house, to support oneself and one's family, to love, to be angry, to cry, to protest, to

support, to move, to participate in this or that religion, this or that party, to educate oneself and one's family, to swim regardless in what ocean of one's country. Citizenship is not obtained by chance: It is a construction that never finished, demands we fight for it. It demands commitment, political clarity, coherence, decision. For this reason a democratic education cannot be realized apart from an education of and for citizenship.

8. Theory of Consensus: Why do people disagree? How is consensus achieved? Whose opinion takes precedence?

Disagreement is normal and something to expect. Disagreement can be an impetus to reflection and a source of growth. The problem that Freire wants to address is when opinions and disagreements are suppressed in the name of control and authority.

There may not be life or human existence without struggle and conflict. Conflict shares in our conscience. Denying conflict, we ignore even the most mundane aspects of our vital and social experience. Trying to escape conflict, we preserve the status quo. None of this is easily accomplished, and I would not like to leave readers with the impression that wanting is enough to change the world. Desire is fundamental, but it is not enough. It is also necessary to know how to want, to learn how to want, which implies learning how to fight politically with tactics adequate to our strategic dreams.

C) Understanding the basic assumptions about human nature society, Learning and aims of Education in relation to curriculum

Human nature refers to the distinguishing characteristics—including ways of thinking, feeling and acting—which humans tend to have naturally, independently of the influence of culture. The questions of what these characteristics are, how fixed they are, and what causes them are amongst the oldest and most important questions in western philosophy. These questions have particularly important implications in ethics, politics, and theology. This is partly because human nature can be regarded as both a source of norms of conduct or ways of life, as well as presenting obstacles or constraints on living a good life. The complex implications of such questions are also dealt with in art and literature, while the multiple branches of the humanities together form an important domain of inquiry into human nature and into the question of what it is to be human.

The branches of contemporary science associated with the study of human nature include anthropology, sociology, sociobiology, and psychology, particularly evolutionary psychology, which studies sexual selection in human evolution, and developmental psychology. The "nature versus nurture" debate is a broadly inclusive and well-known instance of a discussion about human nature in the natural sciences.

National Curriculum Framework for Teacher Education 2009 is a Government of India draft created for proposing changes and updates required to the National Council for

Teacher Education, an Indian government body set up under the National Council for Teacher Education Act, 1993.

The framework is an endeavor of the National Council for Teacher Education to encourage interested parties and stakeholders to give their views on the qualitative and quantitative improvements that could be achieved in educating teachers at school, graduate, post-graduate, doctoral and post-doctoral levels. A previous "curriculum framework" had been developed in 1978 by the council itself (which at that time was just a department rather than an independent body), followed by the NCERT framework for teacher education in 1988, which subsequently led to the "first curriculum framework for quality teacher education" by NCTE in 1998. This was succeeded in 2005 by a "teacher education curriculum framework" by NCERT and in 2006 another "joint curriculum framework" by NCTE and NCERT.

Objectives of the framework

The following are the proposed areas to be targeted, according to the draft framework:

- Context, Concerns and Vision of Teacher Education
- Curricular Areas of Initial Teacher Education
- Sample Redesigned Schemas of Current Teacher Education Programmes
- Evaluating The Developing Teacher
- In-Service Education and Continuous Professional Development
- Preparing Teacher Educators

UNIT 2

Unit-II: Child.s Construction of Knowledge

- Sources of Knowledge : Empirical knowledge Vs Revealed knowledge
- Different kinds of knowledge:
 - (a) Disciplinary knowledge: Concepts and Alternative Concepts
 - (b) Course content knowledge: Criteria of Selection and Concerns
 - (c) Indigenous knowledge Vs Global knowledge
 - (d) Scientific knowledge Vs Religious knowledge
- Process of Construction of Knowledge as given by Jean Piaget, Jerome Bruner and Lev Vygotsky
- Concepts of Belief, Information, Knowledge and Understanding
- Processes and Criteria to be kept in mind for Curriculum Construction.

A) SOURCES OF KNOWLEDGE

Inspiration, revelation, insight, intuition, ecstasy, divine sight and the supreme, blissful state are the seven planes of knowledge. There are four sources of knowledge: instinct, reason, intuition, and direct knowledge of Brahman (God) or Brahma-Jnana (knowledge of God).

1) Instinct

When an ant crawls on your right arm, the left hand automatically moves towards the right arm to drive the ant away. The mind does not reason here. When you see a scorpion near your leg, you withdraw the leg automatically. This is called instinctive or automatic movement. As you cross a street, how instinctively you move your body to save yourself from the cars! There is no thought during such kind of mechanical movement. Instinct is found in animals and birds also. In birds, the ego does not interfere with the free, divine flow and play. Hence the work done by them through their instinct is more perfect than that done by human beings. Have you ever noticed the intricate and exquisite work done by birds in the building of their beautiful nests?

2) Reason

Reason is higher than instinct and is found only in human beings. It collects facts, generalizes, reasons out from cause to effect, from effect to cause, from premises to conclusions, from propositions to proofs. It concludes, decides and comes to final judgment. It takes you safely to the door of intuition and leaves you there. Belief, reason, knowledge and faith are the four important psychic processes. First you have belief in a doctor. You go to him for diagnosis and treatment. The doctor makes a thorough examination of you and prescribes certain medicines. You take them. You reason out: "Such and such is the disease. The doctor has given me some iron and iodide. Iron will improve my blood. The iodide will stimulate the lymphatics and absorb the exudation and growth in the liver. So I should take it." Then, by a regular and systematic course of these drugs, the disease is cured in a month. You then get knowledge and have perfect faith in the efficacy of the medicine and the proficiency of the doctor. You recommend this doctor and his drugs to your friends so that they too might benefit from his treatment.\

3) Intuition

Intuition 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 Superconscious State. You know things in a flash. In intuition there is no reasoning process at all. It is 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. Brahma-Jnana (knowledge of God) is above intuition. It transcends the causal body and is the highest form of knowledge. It is the only Reality.

Empirical knowledge

Empirical evidence, data, or knowledge, also known as **sense experience**, is a collective term for the knowledge or source of knowledge acquired by means of the senses, particularly by observation and experimentation. The term comes from the Greek word for experience, (empeiría). After Immanuel Kant, it is common in philosophy to call the knowledge thus gained a **posteriori knowledge**. This is contrasted with a *priori* knowledge, the knowledge accessible from pure reason alone.

Empirical evidence is information that justifies a belief in the truth or falsity of a claim. In the empiricist view, one can claim to have knowledge only when one has a true belief based on empirical evidence. This stands in contrast to the rationalist view under which reason or reflection alone is considered evidence for the truth or falsity of some propositions. The senses are the primary source of empirical evidence. Although other sources of evidence, such as memory and the testimony of others, ultimately trace back to some sensory experience, they are considered secondary, or indirect.

In another sense, empirical evidence may be synonymous with the outcome of an experiment. In this sense, an empirical result is a unified confirmation. In this context, the term *semi-empirical* is used for qualifying theoretical methods that use, in part, basic axioms or postulated scientific laws and experimental results. Such methods are opposed to theoretical *ab initio* methods, which are purely deductive and based on first principles.

In science, empirical evidence is required for a hypothesis to gain acceptance in the scientific community. Normally, this validation is achieved by the scientific method of hypothesis commitment, experimental design, peer review, adversarial review, reproduction of results, conference presentation and journal publication. This requires rigorous communication of hypothesis (usually expressed in mathematics), experimental constraints and controls (expressed necessarily in terms of standard experimental apparatus), and a common understanding of measurement.

Revealed Knowledge

There are basically three ways in which we can support the claim that we know something. One, the most common, is that the things we know are the best and simplest explanation of observations. This is why we believe that an independently existing external world exists, it is the best and simplest explanation for the consistency of the world, the fact that the world can surprise us, and the fact that the world doesn't directly respond to our will. A second way in which we might know things is if it is impossible for things to be otherwise, given our understanding of truth. It is this reason that motivates us to conclude that we exist, because in order to doubt that we exist something must exist, at the very least the doubt itself. And finally there is "revealed knowledge", facts that are simply apparent to people and can't be denied, as they see it. Revealed knowledge is the basis for qualia/phenomenal properties, as well as the

belief in god. The first two are uncontroversial ways to support a claim of knowledge, but the third is not.

It is my claim that revealed knowledge is knowledge only in name, because the facts we “know” in this way are no more or less likely to be true because they were revealed. I would say that all we need to do is explain why such facts are felt to be revealed and undeniable, and we have explained all there is that needs explaining. Now the explanation may be that the facts are as they seem, but it might also be just a reflection of the structure of our psychological constitution, and thus the supposed facts revealed to us by it might indeed be false.

We are subject to all sorts of cognitive illusions, **for example** the fact that in certain drawings one line may seem to be longer than another even though they are actually the same length. And it may be that even when we know that it is an illusion we may still feel that one line is longer. Although we may admit to being fooled this admission is a second-order judgment. Our first-order judgment keeps telling us that one line is longer, and nothing we can do or think will change this judgment, but because of our capacity for reason our second-order judgment overrides this, and so we don't allow that first-order judgment to influence our thinking about the matter. Thus this is a case of revealed knowledge being inaccurate (and accepted as inaccurate), although we know better one line is still presented to us as longer; we cannot deny that judgment, only overrule it.

B) Different kinds of knowledge

1) CONTENT KNOWLEDGE

A term widely used by educators, **content knowledge** refers to the body of information that teachers teach and that students are expected to learn in a given subject or **content area**, such as English language arts, mathematics, science, or social studies. Content knowledge generally refers to the facts, concepts, theories, and principles that are taught and learned, rather than to related skills—such as reading, writing, or researching—those students also learn in academic courses.

In recent decades, public-school teachers have been required, in most cases, to attain certification in the subject area they teach, which can require education and training beyond a four-year college degree. Many teachers earn a master's degree in education or in a specific academic field, such as biology, chemistry, or physics, for example.

In general, the push to increase certification or educational requirements for teachers is based, in part, on research and other evidence suggesting that teachers who are highly knowledgeable in a specific field tend to be more effective teachers. For example, a teacher with a master's degree in biology may, on average, be less effective teaching a chemistry course than a teacher with an advanced degree in chemistry. Such findings have prompted discussion about whether it is more important for teachers to be highly educated in a specific content area, such as physics, rather

than in general science education or educational theory, for example. In addition, some educators, researchers, and reformers argue that teachers also need to develop strong “pedagogical content knowledge”—i.e., mastery of both subject-area knowledge and the most effective ways to teach students that specific subject.

In elementary schools, teachers have traditionally taught multiple content areas to a class of students, and most elementary schools continue to use this model. Some schools, however, are assigning teachers to subject-specific courses or lessons based on their particular expertise and training, and students are moved from class to class or teacher to teacher throughout the day. When used with younger students, this approach can be controversial, since some educators and parents believe that moving students from teacher to teacher can inhibit the development of strong relationships with adults and adversely affect learning.

2) Global Knowledge

Global education, or global studies, is an interdisciplinary approach to learning concepts and skills necessary to function in a world that is increasingly interconnected and multicultural. The curricula based on this approach are grounded in traditional academic disciplines but are taught in the context of project-and problem-based inquiries. The learner examines issues from the vantage point of the individual, the local community, the nation, and the world community. As social conditioning, an essential component of schooling, global studies takes an international stance that respects local allegiances and cultural diversity while adhering to the principles of the United Nations Declaration of Human Rights.

Global education involves learning about those problems and issues that cut across national boundaries and about the interconnectedness of systems—ecological, cultural, economic, political and technological. Global education involves perspective taking—seeing things through the eyes and minds of others—and it means the realization that while individuals and groups may view life differently, they also have common needs and wants.

One of the aims of global education is a shared international global ethic that would be used to govern socioeconomic decision-making. This ethic would be based on a system of universal values found in United Nations documents on human rights, agreements of the Council of Europe Committee of Ministers, proposals of Amnesty International and other NGOs (nongovernmental organizations) for the realization of human rights, and the Earth Chapter project.

The value and utility of global education derives from the sense that international events require all societies and their citizens to become knowledgeable about the world beyond their national borders. Usually, this imperative is cast in economic terms. Business and political leaders warn that, as the world's economies and financial systems are incredibly interconnected, our material well-being depends on professionals and workers with sophisticated knowledge of the global

economy. In their view, family and local community can no longer define our values. Rather, community-based values must be integrated into the large-scale social institutions that govern our lives.

3) RELIGIOUS KNOWLEDGE

Understanding God's Purpose

The patterns set in motion by biblical religion make the question of religious knowledge of the utmost importance. In essence, mortals have been brought into a state of potential. Everything has been primed in advance: human beings can collaborate with God, to match human actions with God's intention. It is possible to feel the momentum of this idea building; in the biblical outlook individuals can make the decision to let their wills act in unison with that of God, they can stand ready to live in accordance with the whole purpose of history. But how do they do so? How do they know if their actions are correct? How do they know what God's intentions are?

In trying to answer these questions, the biblical approach begins with a word of caution: no one is ever able to know God completely. No mortal can "become God" in the same sense as can the mystic. No one can claim, "I am God." At best, a human being can only gather information about God, collect insights into the workings of God in history, and on this basis construct what is believed to be a close approximation to God's will. But there is always room for error. Humankind is fallible; anyone can make honest mistakes, they can misjudge. There are, however, two things working in one's favor: God's steadfast nature and desire to have that fellowship brought about. There is no method that guarantees perfect religious knowledge; individuals must act on trust. Consequently, the first step to such knowledge is the sincere desire and decision to understand God, no matter how imperfect that understanding may be.

Rational and Emotional Understanding

The quality of knowledge of God is both rational and emotional. It is a full response to the character and person of God. The mystic must reject reason as a reliable approach to religious knowledge. (S)he asserts that his/her personal revelation into the mysteries of ultimate reality transcend rational modes of thought; they cannot be described or explained. Enlightenment, therefore, remains a singular experience.

In biblical religion, however, there is room for a rational approach to God, because humans cannot know God except through the information gathered. Nothing can be known about God in advance.

God is personal, a Someone, not a something; the Creator is anthropomorphic. And, just as with mortals, God's personality is evident in action. It is pieced together by the observer on the basis of what God does. To clarify this point further, one might imagine that two strangers are brought into a room. "A" has no knowledge of "B." "A" can only observe "B's" actions and guess about "B's" nature. "B," however, knows a great deal about "A." "B" has been fully briefed on "A's" habits, background, beliefs, and personality. Such is the case with human beings and God in biblical philosophy. God has an intention; the complete nature of that intention is unknown, since God chooses to not be fully known; but there are clues. One can assume that God has placed trust in mankind by creating persons with the freedom to act.

Knowledge Means Action

There is a strong emphasis in biblical thought to actualize what is potential, to act on what has been seen or heard. A connection therefore exists between the information available in religious knowledge and how that information is used in practice. The two must be taken together. The nature of understanding God's intention is so constructed that it forces people into action; some response, even a negative one, is required by understanding God's role in history. Unlike the perennial system, where spiritual disciplines precede unitive knowledge, biblical religion calls for the one unified movement of knowledge and action. It makes the search for truth practical. Whatever one understands to be God's intention, one must try to fulfill that purpose in one's own life. The recognition of God's purpose, therefore, involves mankind. Instead of forcing human beings out of the finite world, God's purpose increases their interaction with it.

- 4) **Scientific knowledge (SK)** is the study of science as a social activity, especially dealing with "the social conditions and effects of science, and with the social structures and processes of scientific activity." The sociology of scientific ignorance (SSI) is complementary to the sociology of scientific knowledge. The sociology of knowledge, by contrast, focuses on the production of non-scientific ideas and social constructions. Sociologists of scientific knowledge study the development of a scientific field and attempt to identify points of contingency or interpretative flexibility where ambiguities are present. Such variations may be linked to a variety of political, historical, cultural or economic factors. Crucially, the field does not set out to promote relativism or to attack the scientific project; the aim of the researcher is to explain why one interpretation rather than another succeeds due to external social and historical circumstances.

Communication is the Key to Maintaining the Learning Community

In their discussion of the psychological dimension of online learning, Stelzer and Vogelzangs (1998) cite isolation and motivation as primary difficulties in the Web-based environment.

Ensuring a high level of interaction, as suggested previously, goes a long way toward alleviating some of these difficulties. However, one must recognize that the absence of body language and voice inflection can also play an important role in the students' feelings of non-connectedness.

The effective use of Internet communication is the glue that holds a learning community together; it is important that the communication be informal, that it allows for emotional expression, and that it is reinforced throughout the learning process. Instructors can facilitate this communication through the three-step process of planning, teaching, and modeling:

- Plan, well in advance, to use the communication tools of the Internet throughout your facilitation of the course.
 - Use Web pages to display information, give examples, lay out expectations, group together frequently asked questions and answers, and give instructor's notes or additional readings/links.
 - Use bulletin boards to elicit thoughtful responses to specific questions or scenarios.
 - Use chat for role-playing—but only after having prepared students with a detailed Web page. Chat works well in allowing student emotions to come through, and moves very quickly.
 - Use chat for "office hours," when students can ask questions, get tutoring help, or just share what's going on in their life.
 - Use shared electronic whiteboards for reviewing math problems with students. The draw capabilities provide a way for instructors to write out equations, draw diagrams, and work in the same manner they would use an overhead projector. Whiteboards are also handy for software reviews, or any time you need to provide a picture or model to describe something to the student on the fly.
 - Use Microsoft Word's *Comments/Track Changes* functions (attaching documents to e-mail) for paper critiques. This function may be used between students, for peer critiques, as well as to provide instructor feedback on papers.
 - Ask for peer critiques in a number of formats, such as bulletin boards, shared whiteboards, or Microsoft Word's *Track Changes* function.
- Teach students to use Internet tools to appropriately express themselves. Teach them about emoticons. De-emphasize grammar in short communications (while keeping it emphasized for papers and scholarly work). Reinforce the students' efforts by mentoring their progress and praising them when they do well.
- Model communication yourself. When you communicate with students, be fun, let your emotions and passion "hang out." Feel free to make typos and use bad grammar—even joke about it so that they understand it is the feelings and the thoughts that count.

5) Disciplinary Knowledge

It is that knowledge in which one has to be master of one particular. An **academic discipline** is a branch of knowledge. It incorporates expertise, people, projects, communities, challenges, studies, inquiry, and research areas that are strongly associated with a given academic discipline. For example, the branches of science are commonly referred to as the scientific disciplines, e.g. physics, mathematics, computer science.

Individuals associated with academic disciplines are commonly referred to as experts or specialists. Others, who may have studied liberal arts or systems theory rather than concentrating in a specific academic discipline are classified as generalists.

While academic disciplines in and of themselves are more or less focused practices, scholarly approaches such as multidisciplinary, interdisciplinary, transdisciplinarity, and crossdisciplinarity, integrate aspects from multiple academic disciplines, therefore addressing any problems that may arise from narrow concentration within specialized fields of study. For example, professionals may encounter trouble communicating across academic disciplines because of differences in language and/or specified concepts.

Some researchers believe that academic disciplines may be replaced by what is known as or "post academic science",^[2] which involves the acquisition of cross-disciplinary knowledge through collaboration of specialists from various academic disciplines.

C) Process of construction of knowledge

1) As given by Jean Piaget

Constructivism is a theory of knowledge that argues that humans generate knowledge and meaning from an interaction between their experiences and their ideas. It has influenced a number of disciplines, including psychology, sociology, education and the history of science. During its infancy, constructivism examined the interaction between human experiences and their reflexes or behavior-patterns. Jean Piaget called these systems of knowledge *schemata*. Constructivism is not a specific pedagogy, although it is often confused with constructionist, an educational theory developed by Seymour Papert, inspired by constructivist and experiential learning ideas of Piaget. Piaget's theory of constructivist learning has had wide ranging impact on learning theories and teaching methods in education and is an underlying theme of many education reform movements. Research support for constructivist teaching techniques has been mixed, with some research supporting these techniques and other research contradicting those results.

Constructivist Theory

Formalization of the theory of constructivism is generally attributed to **Jean Piaget**, who articulated mechanisms by which knowledge is internalized by learners. He suggested that

through processes of **accommodation** and **assimilation**, individuals construct new knowledge from their experiences.

When individuals *assimilate*, they incorporate the new experience into an already existing framework without changing that framework. This may occur when individuals' experiences are aligned with their internal representations of the world, but may also occur as a failure to change a faulty understanding; for example, they may not notice events, may misunderstand input from others, or may decide that an event is a fluke and is therefore unimportant as information about the world. In contrast, when individuals' experiences contradict their internal representations, they may change their perceptions of the experiences to fit their internal representations.

According to the theory, *accommodation* is the process of reframing one's mental representation of the external world to fit new experiences. Accommodation can be understood as the mechanism by which failure leads to learning: when we act on the expectation that the world operates in one way and it violates our expectations, we often fail, but by accommodating this new experience and reframing our model of the way the world works, we learn from the experience of failure, or others' failure.

It is important to note that constructivism is not a particular pedagogy. In fact, constructivism is a theory describing how learning happens, regardless of whether learners are using their experiences to understand a lecture or following the instructions for building a model airplane. In both cases, the theory of constructivism suggests that learners construct knowledge out of their experiences.

However, constructivism is often associated with pedagogic approaches that promote active learning, or learning by doing. There are many critics of "learning by doing" (a.k.a. "discovery learning") as an instructional strategy (e.g. see the criticisms below). While there is much enthusiasm for constructivism as a design strategy, according to Tobias and Duffy "... to us it would appear that constructivism remains more of a philosophical framework than a theory that either allows us to precisely describe instruction or prescribe design strategies.

2) As given by Jerome Bruner: Constructivist Theory

A major theme in the theoretical framework of Bruner is that learning is an active process in which learners construct new ideas or concepts based upon their current/past knowledge. The learner selects and transforms information, constructs hypotheses, and makes decisions, relying on a cognitive structure to do so. Cognitive structure (i.e., schema, mental models) provides meaning and organization to experiences and allows the individual to "go beyond the information given".

As far as instruction is concerned, the instructor should try and encourage students to discover principles by themselves. The instructor and student should engage in an active dialog (i.e., Socratic learning). The task of the instructor is to translate information to be learned into a format appropriate to the learner's current state of understanding. Curriculum should be

organized in a spiral manner so that the student continually builds upon what they have already learned.

Bruner (1966) states that a theory of instruction should address **four major aspects**:

- predisposition towards learning,
- the ways in which a body of knowledge can be structured so that it can be most readily grasped by the learner,
- the most effective sequences in which to present material, and
- The nature and pacing of rewards and punishments. Good methods for structuring knowledge should result in simplifying, generating new propositions, and increasing the manipulation of information.

This example is taken from Bruner (1973):

"The concept of prime numbers appears to be more readily grasped when the child, through construction, discovers that certain handfuls of beans cannot be laid out in completed rows and columns. Such quantities have either to be laid out in a single file or in an incomplete row-column design in which there is always one extra or one too few to fill the pattern. These patterns, the child learns, happen to be called prime. It is easy for the child to go from this step to the recognition that a multiple table, so called, is a record sheet of quantities in completed multiple rows and columns. Here is factoring, multiplication and primes in a construction that can be visualized."

Principles:

1. Instruction must be concerned with the experiences and contexts that make the student willing and able to learn (readiness).
2. Instruction must be structured so that it can be easily grasped by the student (spiral organization).
3. Instruction should be designed to facilitate extrapolation and or fill in the gaps (going beyond the information given).

3) As given by Lev Vygostky

Constructivism Learning Theory

Constructivism is a meta-concept. It is not just another way of knowing, but a way of thinking about knowing. It is a theory of communication and suggests that each listener or reader will potentially use the content and process of the communication in different ways. There are numerous constructivist perspectives, and the common thread that unites them is that learning is an active process, unique to the individual, and consists of constructing conceptual relationships and meaning from information and experiences already in the learner's repertoire.

Principles of Constructivist Learning

1. The learner uses sensory input and does something with it, ultimately making meaning of it.
2. Learning consists of both constructing meaning and constructing systems of meaning.
Learning is layered.
3. Learning occurs in the mind. Physical activity may be necessary, but is not sufficient alone.
4. Learning involves language. Vygotsky believed that language and learning are inextricably intermeshed.
5. Learning is a social activity.
6. Learning is contextual. We do not isolate facts from the situations and environments in which they are relevant
7. Knowledge is necessary for learning. It is the basis of structure and meaning-making. The more we know, the more we can learn.
8. Learning takes time; it is not spontaneous. Learners go over information, ponder them, use them, practice, experiment.
9. Motivation is a necessary component, because it causes the learner's sensory apparatus to be activated. Relevance, curiosity, fun, accomplishment, achievement, external rewards and other motivators facilitate ease of learning.

Nine Characteristics of a Constructivist Teacher

1. Teacher serves as one of many resources for students, not necessarily the primary source of information.
2. The teacher engages students in experiences that challenge previous conceptions of their existing knowledge.
3. The teacher uses student responses in the planning of next lessons and seeks elaboration of students' initial responses.
4. The teacher encourages questions and discussion among students by asking open-ended questions.
5. The teacher assists students to understand their own cognitive processes (metacognition) by using cognitive terminology such as classify, analyze, create, organize, hierarchy, etc. when framing tasks.
6. The teacher encourages and accepts student autonomy and initiative by being willing to let go of classroom control
7. The teacher makes available raw data and primary resources, along with manipulative and interactive physical materials.
8. The teacher does not separate knowing from the process of finding out. Nouns and verbs.
9. The teacher facilitates clear communication from students in writing and verbal responses, from the point of view that communication comes from ones deep structural

understanding of the concepts being communicated. When they can communicate clearly and meaningfully, they have truly integrated the new learning.

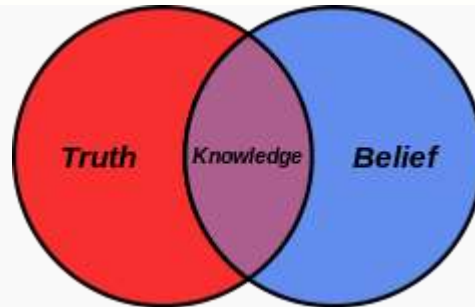
Principles of constructivist course design:

- Maintain a buffer between the learner and potentially damaging effects of instructional practices. Emphasize the affective domain, make instruction relevant to the learner, help learners develop attitudes and beliefs that will support both present learning and lifelong learning, and balance teacher-control with personal autonomy in the learning environment.
- Provide contexts for both autonomous learning and learning within relationships to other students. Group discussion, projects, collaboration as well as independent.
- Provide reasons for learning within the learning activities themselves. Have students identify relevance and purpose.
- Promote and make conscious the skills and attitudes that enable a learner to assume responsibility for his/her cognitive and developmental processes.
- Use the strategic exploration of errors to strengthen the learner's involvement with intentional learning processes and self-feedback.

D) Concepts of Belief, Information, Knowledge and Understanding

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 other words, belief is when someone thinks something is reality, true, when they have no absolute verified foundation for their certainty of the truth or realness of something. Another way of defining belief is, it is a mental representation of an attitude positively orientated towards the likelihood of something being true. In the context of Ancient Greek thought, two related concepts were identified with regards to the concept of belief: *pistis* and *doxa*. Simplified, we may say that *pistis* refers to *trust* and *confidence*, while *doxa* refers to *opinion* and *acceptance*. The English word *doctrine* is derived from *doxa*.

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. Since 'belief' is an important aspect of mundane life, according to the Stanford Encyclopedia of Philosophy, the question that must be answered is, "how a physical organism can have beliefs".



Understanding (also called **intellection**) is a psychological process related to an abstract or physical object, such as a person, situation, or message whereby one is able to think about it and use concepts to deal adequately with that object. Understanding is a relation between the knower and an object of understanding. Understanding implies abilities and dispositions with respect to an object of knowledge sufficient to support intelligent behavior.

An understanding is the limit of a conceptualization. To understand something is to have conceptualized it to a given measure.

Examples: One understands the weather if one is able to predict and to give an explanation of some of its features, etc.

1. A psychiatrist understands another person's anxieties if he/she knows that person's anxieties, their causes, and can give useful advice on how to cope with the anxiety.
2. A person understands a command if he/she knows who gave it, what is expected by the issuer, and whether the command is legitimate, and whether one understands the speaker.
3. One understands a reasoning, an argument, or a language if one can consciously reproduce the information content conveyed by the message.
4. One understands a mathematical concept if one can solve problems using it, especially problems that are not similar to what one has seen before.

Information (shortened as **info** or **info.**) is that which informs, i.e. an answer to a question, as well as that from which knowledge and data can be derived (as data represents values attributed to parameters, and knowledge signifies understanding of real things or abstract concepts). As it regards data, the information's existence is not necessarily coupled to an observer (it exists beyond an event horizon, for example), while in the case of knowledge, the information requires a cognitive observer.

Information can be encoded into various forms for transmission and interpretation (for example, information may be encoded into a sequence of signs, or transmitted via a sequence of signals). It can also be encrypted for safe storage and communication. The concept that information is the message has different meanings in different contexts. Thus the concept of information becomes closely related to notions

of constraint, communication, control, data, form, education, knowledge, meaning, understanding, mental stimuli, pattern, perception, representation, and entropy.

Knowledge: Knowledge is a familiarity, awareness or understanding of someone or something, such as facts, information, descriptions, or skills, which is acquired through experience or education by perceiving, discovering, or learning. Knowledge can refer to a theoretical or practical understanding of a subject. It can be implicit (as with practical skill or expertise) or explicit (as with the theoretical understanding of a subject); it can be more or less formal or systematic. In philosophy, the study of knowledge is called **epistemology**; the philosopher **Plato** famously defined knowledge as "**justified true belief**".

Knowledge acquisition involves complex cognitive processes: perception, communication, and reasoning; while knowledge is also said to be related to the capacity of acknowledgment in human beings.

OVERVIEW OF THE CURRICULUM DEVELOPMENT PROCESS

"Every Journey Begins With The First Step."

The curriculum development process systematically organizes what will be taught, who will be taught, and how it will be taught. Each component affects and interacts with other components. For example, what will be taught is affected by who is being taught (e.g., their stage of development in age, maturity, and education). Methods of how content is taught are affected by who is being taught, their characteristics, and the setting. In considering the above three essential components, the following are widely held to be essential considerations in experiential education in non-formal settings:

Essential Considerations for Curriculum Development:

1. **issue/problem/need** is identified (**issue** → **what**),
2. **characteristics** and **needs** of **learners** (**target audience** → **who**),
3. changes intended for learners (**intended outcomes/objectives** → **what the learners will be able to do**),
4. the important and relevant **content** → (**what**),
5. **methods** to accomplish intended outcomes → (**how**),
6. **evaluation strategies** for methods, content, and intended outcomes → (**What works?**).

UNIT 3

Unit-III : History, Politics and Education

· Prominent Characteristics of Education in India during Colonial rule.

- India's Contemporary Education: Continuities and Shift in Colonial legacy
 - Political nature of Education
 - Teacher and Society: A Critical Appraisal of the Status of a Teacher in Indian Society
- Autonomy, Academic Freedom and Accountability: Concept and Issues

A) Prominent Characteristics of Education in India during Colonial Rule

Education in India - Colonial India

The ideas and pedagogical methods of education during the colonial period, from 1757 to 1947, were contested terrain. The commercial British East India Company ruled parts of India from 1764 to 1858. A few eighteenth-century company officials became scholars of Sanskrit, Persian, and Tamil and promoted "Oriental" learning, which was classical, demotic learning in indigenous languages. However, they were outnumbered by "Anglicists," those who denigrated "Oriental" learning and advocated the introduction of institutions for Western learning based upon the British curriculum with English as the medium of instruction. By the early nineteenth century, when English was made the official language of government business, British policy promoted a cheap, trickle-down model for colonial education. When the British crown abolished company rule in 1858, government universities existed at Bombay (contemporary Mumbai), Calcutta (Kolkata), and Madras (Chennai); about two thousand students studied at thirteen government colleges in all of British India, and another 30,000 students were in government secondary schools. Direct rule did not change the decision to deemphasize primary education to provide occupational training for young Indian men who took jobs both in the lower tiers of the government and in urban, Western-style legal and medical services.

Nongovernment schools established by Western Christian missions and Indian social and religious reform organizations provided the only opportunities for elementary education in the nineteenth century. American and English missionaries founded men's colleges, and by the twentieth century, Lucknow, Lahore, and Madras all had Christian women's colleges as well. Foreign teachers staffed these institutions, offering a Western curriculum in English with financial support for the children of Christian converts. Reformist societies also started schools, partly to provide Western education without the threat of Christian conversion. The curricula in private girls' schools ranged from the Urdu, Persian, writing, arithmetic, needlework, and Islamic studies of the Punjabi Anjuman-i-Himayat-i-Islam primary schools in northwestern India to the Western-style liberal arts curriculum of Bethune College, founded by liberal Brahmo Samajists (Hindu reformers) in Calcutta. Even voluntary societies' members who wanted to provide educational alternatives for their children disagreed about the advantages and disadvantages of the colonial educational model for both content and the language of instruction.

When British officials who represented direct rule by the crown introduced modest self-government in the 1860s, they shifted financial responsibility for education to a growing Indian

middle class. Educating urban sons for professions dominated local educational spending, to the detriment of rural and women's education. Families of respectable middling status usually chose to send their daughters to gender-segregated educational institutions once there were schools taught in vernacular languages with general curricula. While older historians narrated the "insidious, total and transparent" domination of the educational system by the colonial state, more recent scholarship delineates the "'creative' resistance" to state agency and suggests that there was a "combat" between "consciously opposed sides" (Kumar). As the nationalist movement gained supporters in the twentieth century, Indian leaders developed several nationalist educational paradigms to challenge the colonial model. Mahatma Gandhi wanted the state to teach basic literacy in vernacular languages to the majority of the population. Rabindranath Tagore, India's first recipient of the Nobel prize for literature, believed that the English language provided Indians access to the sharing of knowledge across international borders and that education should include the teaching of India's cultural traditions. The fight for freedom from colonialism preempted decisions about educational ideologies until after 1947.

The history of education in the South Asia began with teaching of traditional elements such as Indian religions, Indian mathematics, Indian logic at early Hindu and Buddhist centres of learning such as Taxila (in modern-day Pakistan) and Nalanda (in India) before the common era. Islamic education became ingrained with the establishment of the Islamic empires in the Indian subcontinent in the Middle Ages while the coming of the Europeans later brought western education to colonial India. A series of measures continuing throughout the early half of the 20th century ultimately laid the foundation of education in the Republic of India, education in Pakistan and much of South Asia.



The Mohra Muradu monastery at Taxila, in modern day Pakistan.

Early education in India commenced under the supervision of a *guru*. Initially, education was open to all and seen as one of the methods to achieve Moksha, or enlightenment. As time progressed, due to superiority complexes, the education was imparted on the basis of caste and the related duties that one had to perform as a member of a specific caste. The *Brahmans* learned about scriptures and religion while the *Kshatriya* were educated in the various aspects of

warfare. The *Vaishya* caste learned commerce and other specific vocational courses while education was largely denied to the *Shudras*, the lowest caste. The earliest venues of education in India were often secluded from the main population. Students were expected to follow strict monastic guidelines prescribed by the *guru* and stay away from cities in *ashrams*. However, as population increased under the Gupta empire centres of urban learning became increasingly common and Cities such as Varanasi and the Buddhist centre at Nalanda became increasingly visible.

Villages

Jha argues that local schools for pre-adolescent children were in a flourishing state in thousands of villages of Bihar and Bengal until the early decades of the nineteenth century. They were village institutions, maintained by village elders with local funds, where their children (from all caste clusters and communities) could, if the father wished, receive useful skills. However, the British policies in respect of education and land control adversely affected both the village structure and the village institutions of secular education. The British legal system and the rise of caste consciousness since the second half of the nineteenth century made it worse. Gradually, village as the base of secular identity and solidarity became too weak to create and maintain its own institution by the end of the nineteenth century and the traditional system decayed.

British education became solidified into India as missionary schools were established during the 1820s. New policies in 1835 gave rise to the use of English as the language of instruction for advanced topics.

Universities

India established a dense educational network (very largely for males) with a Western curriculum based on instruction in English. To further advance their careers many ambitious upper class men with money, including Gandhi, Nehru and Muhammad Ali Jinnah went to England, especially to obtain a legal education at the Inns of Court. By 1890 some 60,000 Indians had matriculated, chiefly in the liberal arts or law. About a third entered public administration, and another third became lawyers. The result was a very well educated professional state bureaucracy. By 1887 of 21,000 mid-level civil service appointments, 45% were held by Hindus, 7% by Muslims, 19% by Eurasians (European father and Indian mother), and 29% by Europeans. Of the 1000 top -level positions, almost all were held by Britons, typically with an Oxbridge degree.



Victoria gate, named after the Empress in 1914, at Aligarh Muslim University

Science



A file photo of University of Bombay's Fort Campus taken in the 1870s.

During the 19th and 20th centuries most of the Indian princely states fell under the British Raj. The British rule during the 19th century did not take adequate measures to help develop science and technology in India and instead focused more on arts and humanities. Till 1899 only the University of Bombay offered a separate degree in sciences. In 1899 B.Sc and M.Sc. courses were also supported by the University of Calcutta. By the late 19th century India had lagged behind in science and technology and related education. However, the nobility and aristocracy in India largely continued to encourage the development of sciences and technical education, both traditional and western.

While some science related subjects were not allowed in the government curriculum in the 1850s the private institutions could also not follow science courses due to lack of funds required to establish laboratories etc. The fees for scientific education under the British rule were also high. The salary that one would get in the colonial administration was meager and made the prospect of attaining higher education bleak since the native population was not employed for high positions in the colonial setup. Even the natives who did manage to attain higher education faced issues of discrimination in terms of wages and privileges.

B) India's Contemporary Education: Continuities and shift in colonial legacy

Contemporary India: Development, Environment, Public Health (Alliance for Global Education) (Third Party)

The Program

India has entered the world stage as a rising economic superpower, technology leader and strategic partner. Already the world's largest democracy, soon to be the world's most populous nation and with a 3,000 year old civilization that is continually redefining itself, India is an exciting place to study. This program enables students to explore the complexity of contemporary India by engaging in both coursework and an internship or directed field research. It is designed for students from a wide variety of majors and academic interests, with a

curriculum that spans development studies and international affairs, business and economics, public health and environmental studies, anthropology, history, political science, films and media studies, women's studies and the performing arts.

By providing a core academic base, allowing progressive specialization through electives and culminating in an internship or directed research project of the student's own choosing, the program takes an interdisciplinary approach to India's contemporary problems that are both local and global in scope.

The Academics

The curriculum consists of **two** required courses:

Contemporary India: A political, historical and social survey of post-Independence India as a complex yet unified multicultural, multi-linguistic, religiously pluralistic democracy. This core course provides an interdisciplinary academic and theoretical framework for viewing, experiencing, and understanding India.

Internship or Directed Research: students engage in either an internship or directed research under the supervision of a faculty member. The first component of the program involves training in field research methods and Marathi language for research purposes. The second component involves either placement at an NGO, multi-national business, IT Company, cultural organization, or think tank or directed field research in a variety of disciplines. Students are expected to spend at least 20 hours a week at their internship or in active research.

In addition to the required coursework, students can take two of the following three credit classes: Environmental Issues, Public Health, Nation, Case and Gender through Film, Development Economics, Social Justice, and Hindi. The program also offers students the option of taking co-curricular, non-credit classes in yoga, Kathak dance or Bharatanatyam, and music.

The Experience

Students are offered a range of housing placements. You can elect to room with other students on the program or with Indian students in an apartment adjoined to Indian student housing, to live semi-independently with an Indian family, or to undertake an embedded home stay within an Indian household. Your housing placement will be made according to your stated preference and availability.

C) Political nature of Education

- 1) It helps to generate the feeling of patriotism among students.
- 2) It helps to understand the political structure of the country.
- 3) Education aims to develop national integration and international understanding.

- 4) It promotes universal brotherhood.
- 5) It helps to respect the cultural diversity.
- 6) It helps in social mobility and enrich the economic factors that help to increase the standard of living

D) Teacher and Society: A critical appraisal of the status of a teacher in Indian Society

Teacher in role is a method of teaching that utilizes techniques of drama to facilitate education. It is a holistic teaching method designed to integrate critical thought, examination of emotion and moral values and factual data to broaden the learning experience and make it more relevant to everyday life situations.



Teacher in role with student on computer

If the role of a teacher is to teach, the role of a student must be to learn. However, it has been agreed that learning is not only an exercise in reading and reciting facts, but in gaining a deeper insight of events and situations. This is where drama becomes an invaluable tool. Through the use of drama and dramatic conventions a teacher does not only teach and learn the *what* but also the *why* and *how*.

He can lead them anywhere. During the early education, the students tend to determine their aims in life and their future plans, in consultation with their teachers. Therefore, a good and visionary teacher can play a prominent role in making the future of his students while as a corrupt teacher can only harm his students much more seriously than a class of corrupt and perverted judiciary, army, police, bureaucracy, politicians or technocrats. A corrupt and incompetent teacher is not only a bad individual, but also an embodiment of a corrupt and incompetent generation. A nation with corrupt teachers is a nation at risk; every coming day announces the advent of its approaching destruction.

The importance of a teacher as an architect of our future generations demands that only the best and the most [intelligent] and competent members of our intelligentsia be allowed to qualify for this noble profession. It is unfortunate to find that generally the worst and the most

incapable people of the society find their way into this profession. Anyone who fails to find an opening in any other walk of life, gets into this profession and recklessly plays with the destiny of the nation. An important reason for this is understood to be the poor salaries of our primary and secondary teachers which are no better than that of clerks. A large number of our teachers is, therefore, frustrated and uninterested.

Teachers are an extremely important facet of any society for a number of reasons and their role in society is both significant and valuable.

- Teachers are the people who educate the youth of society who in turn become the leaders of the next generation of people
- Teachers are the people who are teaching children and imparting knowledge upon them in their most impressionable years
- What children learn from their teachers at a young age will most likely stay with them in some facet for the rest of their lives

Teachers play an extraordinary part in the lives of children for the formative years of their development and the importance of teachers is something that cannot be understated. They involve themselves in molding their students into responsible citizens of their country.

Within a school, if teachers are well educated and if they are intellectually alive and take keen interest in their job, then only success is ensured.

E) Autonomy, Academic Freedom and Accountability: Concept and Issues

- Autonomy means power of knowledge which brings responsibility to an individual.
- Autonomy, Responsibility and accountability are interrelated.
- A person who has a power to fulfill the responsibilities is also answerable for his or her action.
- Education helps to construct knowledge and acquirement of skills which bring academic freedom for the individual.
- There should be a balance between the power and the responsibility.
- Education helps to establish the form of authority which are centralization and decentralization.

UNIT 4

Unit- IV : Knowledge and Power : Sociological Perspective

- Representation , Inclusion and Exclusion of knowledge of different social groups in curriculum and textbooks
 - Contestations to .Knowledge.:
- (a) Dominance
(b) Marginalisation

(c) Subversion

· Role of Education in reproducing dominance and challenging Marginalisation with reference to Class, Caste, Gender and Religion.

A) Representation, Inclusion and Exclusion of knowledge of Different social groups in curriculum and textbooks

Now days the curriculum cover the knowledge of different social group. The social group can be divided into four categories:

1. Marginalized group
2. S.T/S/C.
3. Scavengers
4. OBC

Relevance of Marginalized group in curriculum and textbooks

- It helps to promote cultural diversity.
- It helps to understand the social structure of society
- Help to provide various remedies for the upliftment of the marginalized and other social groups.
- It helps to develop a feeling of empathy among the learner.
- Caste discrimination can be avoided by broadening the views of the learner.
- Promotes the unity and integrity among the students.
- It helps to eliminate gender stereotype.
- Proper programs can be conducted for the upliftment of the society.

B) Contestations to “Knowledge”

A) Dominance

Dominance in ethnology is an "individual's preferential access to resources over another. Dominance in the context of biology and anthropology is the state of having high social status relative to one or more other individuals, who react submissively to dominant individuals. This enables the dominant individual to obtain access to resources such as food or potential mates at the expense of the submissive individual, without active aggression. The absence or reduction of aggression means unnecessary energy expenditure and the risk of injury are reduced for both. The opposite of dominance is submissiveness.

Dominance may be a purely dyadic relationship, i.e. individual A is dominant over individual B, but this has no implications for whether either of these is dominant over a third individual C.

Alternatively, dominance may be hierarchical, with a transitive, so that if A dominates B and B dominates C, A always dominates C. This is called a linear dominance hierarchy. Some animal societies have despots, i.e. a single dominant individual with little or no hierarchical structure amongst the rest of the group. Horses use coalitions so that affiliated pairs in a herd have an accumulative dominance to displace a third horse that normally out-ranks both of them on an individual basis.

Establishment and Maintenance

Dominance may initially be established by fighting, or simply by threatening displays or interchanges. Once established, however, dominance is usually maintained by agonistic (competitive) behaviours with aggression considerably reduced or sometimes absent. In the maintenance of dominance relationships, the behaviour of the sub-dominant animal is critical. If a dominant animal perceives its status is being threatened, it will likely threaten the sub-dominant individual. The sub-dominant must then either escalate the intensity of the interaction to challenge the dominant, or defer. In this way, it is often the behaviour of the sub-dominant animal that maintains the dominance relationship, rather than the dominant.

Functions

The ultimate function of a dominance hierarchy is to increase the individual or inclusive fitness of the animals involved in its formation. Fighting to acquire resources such as food and mates is expensive in terms of time, energy and the risk of injury. By developing a dominance hierarchy, animals determine which individuals will get priority of access to resources, particularly when they are limited; there is a reduction in aggression once a pecking order has been developed. Therefore, the proximate functions of a pecking order are to reduce the costs of time, energy and risk of injury incurred during resource acquisition and defense.

A dominant animal is one who's sexual, feeding, aggressive and other behavior patterns subsequently occur with relatively little influence of the other group members. Subordinate animals are opposite; their behavior can be relatively easily influenced or inhibited by other group members. For many animal societies, an individual's position in the dominance hierarchy corresponds with their opportunities to reproduce, however, in other animal societies, the dominance hierarchy may be unrelated to (potential) opportunities to reproduce, e.g. naked mole-rat, bees and many farm, laboratory, zoo and companion animals. Studies have shown there is a strong association between high testosterone levels and dominance behaviors that help enhance mating success in men.

In hierarchical societies, dominant individuals may exert control over others. For example, in a herd of feral goats it is a large male that is dominant and maintains discipline and coherence of the flock. He leads the group but shares leadership on a foraging expedition with an old she-goat who will normally outlast a succession of dominant males. However, earlier work showed that leadership orders in goats were not related to age or dominance. In sheep, position in a moving flock is highly correlated with social dominance, but there is no definite study to show consistent

voluntary leadership by an individual sheep. It has been suggested, however, that more commonly, decision-taking about the actions of the group is dissociated from social dominance.

B) Marginalization

Marginalization comprises those processes by which individuals and groups are ignored or relegated to the sidelines of political debate, social negotiation, and economic bargaining—and kept there. Homelessness, age, language, employment status, skill, race, and religion are some criteria historically used to marginalize. Marginalized groups tend to overlap; groups excluded in one arena, say in political life, tend to be excluded in other arenas, say in economic status. Concern with marginalization is relatively recent. As the advance of democratization and citizenship swell the ranks of those “included” in the social order, the plight of those with limited access to the franchise and without rights or at least enforceable claims to rights becomes problematic.

First, what are marginalizing processes and how do they operate?

Second, why are so many of the same groups—women, ethnic groups, religious minorities—marginalized in a variety of situations and institutions?

Major approaches to marginalization are represented by neoclassical economics, Marxism, social exclusion theory, and recent research that develop social exclusion theory findings.

Neoclassical economists trace marginalization to individual character flaws or to cultural resistance to individualism. Their explanations of poverty stress the notion of the *residuum*, defined as those “limp in both body and mind.” This residuum—the term was made famous by the Cambridge economist, Alfred Marshall—will only work when forced to do so. Generous social policies encourage its members to stay out of the labor force. To explain why some groups are found disproportionately in the residuum, economists sometimes cite the presence of a “culture of poverty,” which although adapted to alleviate the worst effects of poverty in fact reinforces it.

In contrast, Marxists see marginalization as a structural phenomenon endemic to capitalism. For Marx, the “reserve army of the proletariat,” a pool of unemployed or partially unemployed laborers, is used by employers to lower wages. Together with *déclassé* elements, the most impoverished elements from the “reserve army” form the bases for the lumpenproletariat—in Marx’s time, a motley conglomeration of beggars, discharged soldiers, prostitutes, and vagabonds. Marx also noted the presence of ethnic minorities, such as the Irish, in the “reserve army.” He attributed the composition of the reserve army of labor and thus the lumpenproletariat to capitalist efforts to divide the working class along ethnic lines.

Although strongly influenced by Marxism, contemporary social exclusion theory stresses the importance of social networks and symbolic boundaries. Studying the economic recovery of the late 1970s, French sociologists noted that some groups—particularly migrants and youth—benefited relatively little from renewed growth. They concluded that sustained unemployment leads to poverty, which in turn leads to social isolation, including the breakup of families and the financial inability to fully participate in popular culture. Shorn of kin ties and cultural associations, the unemployed have difficulty finding a job and eventually become unemployable.

C) Subversion

It refers to an attempt to transform the established social order and its structures of power, authority, and hierarchy. **Subversion** (Latin subvertere: overthrow) refers to a process by which the values and principles of a system in place, are contradicted or reversed. More specifically, subversion can be described as an attack on the public morale and, "the will to resist intervention are the products of combined political and social or class loyalties which are usually attached to national symbols. Following penetration, and parallel with the forced disintegration of political and social institutions of the state, these loyalties may be detached and transferred to the political or ideological cause of the aggressor". Subversion is used as a tool to achieve political goals because it generally carries less risk, cost, and difficulty as opposed to open belligerency. Furthermore, it is a relatively cheap form of warfare that does not require large amounts of training. A **subversive** is something or someone carrying the potential for some degree of subversion. In this context, a "subversive" is sometimes called a "traitor" with respect to (and usually by) the government in power.

Terrorist groups generally do not employ subversion as a tool to achieve their goals. Subversion is a manpower intensive strategy and many groups lack the manpower and political and social connections to carry out subversive activities. However, actions taken by terrorists may have a subversive effect on society. Subversion can imply the use of insidious, dishonest, monetary, or violent methods to bring about such change.

Definitions:

"**Subversion** is the undermining or detachment of the loyalties of significant political and social groups within the victimized state, and their transference, under ideal conditions, to the symbols and institutions of the aggressor."

"**Subversion** — Actions designed to undermine the military, economic, psychological, or political strength or morale of a governing authority."

"**Subversive Activity** — Anyone lending aid, comfort, and moral support to individuals, groups, or organizations that advocate the overthrow of incumbent governments by force and violence is subversive and is engaged in subversive activity. All willful acts that are intended to be detrimental to the best interests of the government and that do not fall into the categories of treason, sedition, sabotage, or espionage will be placed in the category of subversive activity."^[12]

"Subversive Political Action — A planned series of activities designed to accomplish political objectives by influencing, dominating, or displacing individuals or groups who are so placed as to affect the decisions and actions of another government."

Subversion — "A destructive, aggressive activity aimed to destroy the country, nation, or geographical area of your enemy... [By demoralizing the cultural values and changing the population's perception of reality].

Subversive actions can generally be grouped into three interrelated categories:

- Establishing front groups and penetrating and manipulating existing political parties
- Infiltrating the armed forces, the police, and other institutions of the state, as well as important non-government organizations
- Generating civil unrest through demonstrations, strikes, and boycotts.

Other factors, while not specifically falling into these categories, may also be useful to subversive dissidents. Additionally, many tools may overlap into other groups of tools as well. As an example, subversives may infiltrate an organization for cultural subversion more so than for control. Civil unrest may be used to provoke the government into a violent response.

C) Role of Education in reproducing dominance and challenging Marginalization with reference to class, caste, Gender and Religion

- The ultimate function of a dominance hierarchy is to increase the individual or inclusive fitness of the animals involved in its formation.
- Dominant individuals may exert control over others.
- Marginalization comprises those processes by which individuals and groups are ignored or relegated to the sidelines of political debate, social negotiation, and economic bargaining—and kept there.
- Homelessness, age, language, employment status, skill, race, and religion are some criteria historically used to marginalize.
- To reduce biasness among various caste, class, creed and religion.
- To develop understanding among international aspects.