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Epistemology

Epistemology is the study of human knowledge. The term Epistemology (Greek episteme, meaning "knowledge, understanding") was first used by J F Ferrier to describe the branch of philosophy concerned with the nature, scope, method and limit of human knowledge. It is also referred to as "theory of knowledge". It questions what knowledge is and how it can be acquired, and the extent to which knowledge pertinent to any given subject or entity can be acquired. Epistemologists concern themselves with a number of tasks, which we might sort into two categories.

First, the *nature* of knowledge; that is, what does it mean to say that someone knows, or fails to know, something? This is a matter of understanding what knowledge is, and how to distinguish between cases in which someone knows something and cases in which someone does not know something.

Second, the extent of human knowledge; that is, how much do we, or can we, know? How can we use our reason, our senses, the testimony of others, and other resources to acquire knowledge? Are there limits to what we can know? Is it possible that we do not know nearly as much as we think we do?

Knowledge

Knowledge is the sum of what we know. It is true and justified belief. Knowledge is also considered as the theoretical or practical understanding of a subject. Facts,

information and skills acquired through experience or education correspond to Knowledge.

Concept of knowledge

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

Truth and knowledge

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

objectives of education as well as instruments and uses of evaluation. Like this knowledge helps philosophy to interpret, guide, monitor and validating the educational process at every stages. Nature of knowledge Epistemology is the theory of knowledge. It deals with knowledge as a universal matter and aims to discover what is involved in the process of knowing. As such it belongs for the most part to the critical or analytical aspects of philosophy. It asks many questions. Is there something common to all the deferent activities to which we apply the term "knowing"? Does it know a special sort of mental act? Can we anything beyond the objects with 5 which our senses acquaint us? Does knowing make any difference to the object know? These are not idle questions. For if we can know that the knowledge we possess is beyond error, that knowledge becomes a foundation of our search for more of it. Admittedly it may folly to believe that we shall ever discover true knowledge when all we have ever known is only an approximation of it. Doubtful knowledge then only generates more doubtful knowledge. As Santayana wrote, knowledge is a "torch of smoky pine that lights the pathway but one step ahead, across a void of mystery and dread". Still we must strive, though a step at a time, to understand as well as we can the source of it, we shall be in a better position to understand the true nature of that reality to which it is related.Unlike philosophy, epistemology is not interested in amassing and classifying facts and data and subjecting them to statistical process. The epistemologist has ideas about how people think and feel, but he does not claim to be able to explain them scientifically. He is, after all, a philosopher and not a social scientist. The epistemologist may possess all the information commonly described as "knowledge', but still he will ask the question, 'what is knowledge after all'? and he may not come up with an answer.

He also examines relevant psychological concepts such as perception, memory, and reinforcement to determine whether they are consistent, not necessarily with factual matters but with themselves. Knowing the psychological problem is to state and assess the very grounds on which knowledge rests and claim to knowledge are made. There are, of course, different types of knowledge, are important.

Knowledge Building

Knowledge building may be defined simply as the creation, testing, and improvement of conceptual structures. It is not confined to education but applies to creative work of all kinds.

Knowledge building refers to the process of creating new cognitive structures as a result of common goals, discussions, and synthesis of ideas. These pursuits should advance the current understanding of individuals within a group, at a level beyond their initial knowledge level, and should be directed towards advancing the understanding of what is known about that topic or idea. Knowledge building can be considered as deep constructivism that involves making a collective inquiry into a specific topic, and coming to a deeper understanding through interactive questioning, dialogue, and continuing improvement of ideas. The teacher becomes a guide, rather than a director, and allows students to take over a significant portion of the responsibility for their own learning, including planning, execution, and evaluation.

Tree of Knowledge System is an approach that has elements in common. The System has developed in four major phases, Matter, Life, Mind and Culture. As part

of a new unified view,this offers a new way to bridge philosophy and psychology and integrate human knowledge systems into a more coherent holistic view.

The Tree of Knowledge System
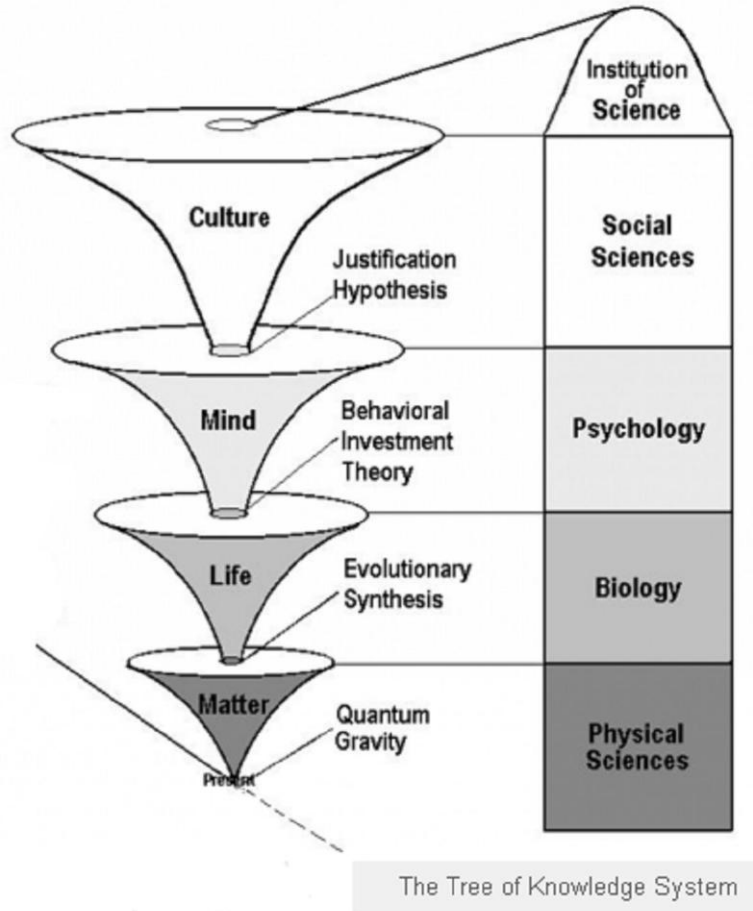
Ways of Acquiring Knowledge

Knowledge can be acquired along the following ways: a. Observation and Experience This may be more or less sophisticated, ranging from a simple, "I saw" to carefully design controlled experimentation. b. Reason / Logic Taking other knowledge as data, by logical operations knowledge can be inferred. For example the theoretical construct, the electron, is derived by logical inferences from observations and experiment. Such knowledge, being

derivative, cannot be better than the knowledge upon which it is founded. Modeling a situation sometimes allows those with a hands-on viewpoint to learn howto do something. This pragmatic approach is often seen in computer programming. c. Testimony Knowledge based on the acceptance of testimony involves accepting what others say. For example, I only know that Kent is a county of England, that the First World War was horrendous. This seems to be a common way we get knowledge but is seen by philosophers as problematic. See Testimony, philosophical problems of. d. Authority Knowledge based on authority may rely upon the reputation of an individual such as Aristotle or Einstein or perhaps on institutional authority such as that of the Roman Catholic Church or Oxford University. Note that an authority may adopt knowledge upon other criteria such as divine revelation or 10 observation as well as upon authority. Authority may have a political basis in the sense that some political process, perhaps involving status as well as simple voting, peer review, or comment. This is familiar to participants in academia. e. Revelation Many people believe knowledge may be obtained via revelation or even divine revelation, which may be directly from God or another spirit, perhaps conveyed through a religious text or texts, such as the Bible, although there is no evidence to support this claim.

Data, Information and Knowledge

Data represents unorganized and unprocessed facts. Usually data is static in nature. It

can represent a set of discrete facts about events. Data is a prerequisite to information.

Data is required for creating the necessary information. Information can be considered as an aggregation of data (processed data) which makes decision making easier. Information has usually got some meaning and purpose.

Human knowledge refers to human understanding of a subject matter that has been acquired through proper study and experience. Knowledge is usually based on learning, thinking, and proper understanding of the problem. Knowledge is not information and information is not data. Knowledge is derived from information in the same way information is derived from data. We can view it as an understanding of information based on its perceived importance or relevance to a problem area. It can be considered as the integration of human perceptive processes that helps them to draw meaningful conclusions.

Types of Knowledge

1. A Priori

A priori and a posteriori are two of the original terms in epistemology (the study of knowledge).

A priori literally means "from before" or "from earlier." This is because a priori knowledge depends upon what a person can derive from the world without needing to experience it directly. However a degree of indirect experience is necessary upon which a priori knowledge can take shape.

Let's look at an example. If you were in a closed classroom with no windows and someone asked you what the weather was like, you would not be able to answer them with any degree of truth. If you did, then you certainly would be in the possession of apriori knowledge that you gained before entering the Classroom.

2. A Posteriori

A posteriori literally means "from what comes later" or "from what comes after." This is a reference to experience and using a different kind of reasoning (inductive) to gain knowledge. This kind of knowledge is gained by first having an experience (acquired through the five senses) and then using logic and reflection to derive understanding from it. In philosophy, this term is sometimes used interchangeably with empirical knowledge, which is knowledge based on observation.

Example: In a field, you noticed Cow 1 to be black, Cow 2 to be black, Cow 3 to be black,………… Cow 10 to be black. You interpreted that Cows are Black. This is a posteriori knowledge.

It is believed that a priori knowledge is more reliable than a posteriori knowledge.

This might seem counterintuitive, since in the former case someone can just sit inside of a room and base their knowledge on factual evidence while in the latter case someone is having real experiences in the world. But the problem lies in this very fact: everyone's experiences are subjective and open to interpretation. This is a very complex subject and you might find it illuminating to read this post on knowledge issues and how to identify and use them. A mathematical equation, on the other hand, is law.

3. Explicit Knowledge

Explicit knowledge is similar to a priori knowledge in that it is more formal or perhaps more reliable. Explicit knowledge is knowledge that is easily recorded and

communicated through mediums. It is our libraries and databases. The specifics of what is contained is less important than how it is contained. Anything from the sciences to the arts can have elements that can be expressed in explicit knowledge.

The defining feature of explicit knowledge is that it can be easily and quickly transmitted from one individual to another, or to another ten-thousand or ten-billion. It also tends to be organized systematically. For example, a history textbook on the Indian Independence would take a chronological series of events with dates, places and years.

4. Tacit Knowledge

Whereas explicit knowledge is very easy to communicate and transfer from one individual to another, tacit knowledge is precisely the opposite. It is extremely difficult, if not impossible, to communicate tacit knowledge through any medium.

For example, someone who is an expert musician cannot truly communicate their knowledge; in other words, they cannot tell someone how to play the instrument and the person will immediately possess that knowledge. That knowledge must be acquired to a degree that goes far, far beyond theory. In this sense, tacit knowledge would most closely resemble a posteriori knowledge, as it can only be achieved through experience.

5. Propositional Knowledge (also Descriptive or Declarative Knowledge)

Our last pair of knowledge theories are propositional and non-propositional knowledge, both of which share similarities with some of the other theories already discussed. Propositional knowledge has the oddest definition yet, as it is commonly held that it is knowledge that can literally be expressed in propositions; that is, in declarative sentences (to use its other name) or indicative propositions. Propositional knowledge is not so different from a priori and explicit knowledge. The key attribute is knowing that something is true. Again, mathematical equations could be an example of propositional knowledge, because it is knowledge of something, as opposed to knowledge of how to do something.

6. Non-Propositional Knowledge (also Procedural Knowledge)

Non-propositional knowledge (which is better known as procedural knowledge, but I decided to use "nonpropositional" because it is a more obvious antithesis to "propositional") is knowledge that can be used; it can be applied to something, such as a problem. Procedural knowledge differs from propositional knowledge in that it is acquired "by doing"; propositional knowledge is acquired by more conservative forms of learning.

Example: The hands-on experience is extremely valuable; as it can be used to obtain employment. A computer expert might have procedural knowledge about a computer algorithm in multiple languages. Thus this 'hands-on' expertise and experience of the programmer might be of commercial value to IT related jobs.

Knowledge and Skill

Knowledge is a mental or theoretical, rather than practical understanding of a subject. Facts, information and skills acquired through experience or education correspond to Knowledge. Knowledge can be gained from a boo, library and experience. Having knowledge of how to do something does not necessarily mean that you can do it, even if you understand the steps and what should happen.

Skill refers to the ability of using that information and applying it in a specific context.

In other words, knowledge refers to theory and skill refers to successfully applying that theory in practice and getting expected results.

For instance, a sales person with an MBA degree may have learned all the principles of marketing and selling in his business school. Going forward, in his work he would know more about his company, in the arena of its product line, target market, competitors etc. All the above is knowledge. Transferring this knowledge to create a successful sales strategy and pitch and achieving those sales targets is the sales person's skill.

Teaching and Training

Teaching is act of imparting knowledge by a person. It is more of a theory based concept rather than a practical approach, where as Training is acquiring skills to handle specific activity through repeating practice work. It is more of getting your hands dirty on what you have learned so that the practical use can be applied. Teaching is a broader term than training. Teaching is a process of educating someone. It's a broader concept of mentoring, with the help of practical examples, theories, facts and figures. Further, analysis of results improves the learner knowledge and skills to handle different situations of life. Whereas training is part of teaching, It's a set of activities, focussing more on the application of knowledge to perform specified tasks.

Reason and Belief

Reason is the ability to verify facts applying logic. It is associated with cognition, thinking and intellect of a person. Belief is simple state of mind to acceptance that a proposition is true, without regard to reason(s) - any reasons could be good, faulty or completely non-existent. It is a form of mental representation.

Our beliefs are things that we are thoroughly convinced of. Usually but not always they are ideas, concepts that we gather through information and experience. Because of that, our beliefs can change over time as we gain more knowledge and experience throughout our lives. Reason is the means by which rational beings understand

themselves to think about cause and effect, truth and falsehood, and what is good or bad. It is also closely identified with the ability to self-consciously change beliefs, attitudes, traditions, and institutions, and therefore with the capacity for freedom and self-determination.

Knowledge getting Strategies (Activity, Discovery and Dialogue)

Knowledge acquisition involves complex cognitive processes - perception, communication, and reasoning; while major knowledge getting strategies include **Activity, Discovery and Dialogue.**

Activity based knowledge getting strategies

Learners watch and know what they do. The observation of activity both visual and non visual elements. Visual elements are the behaiours. Whereas non visual elements are thinking - aloud and teach – back.

There are diverse range of alternatives for activity like learning through play, technology based learning, activity based learning, group work, project method, etc. **Activity based knowledge getting** is more than just listening, active participation of each and every student is a necessary aspect in active learning. Students must be doing things and simultaneously think about the work done and the purpose behind it so that they can enhance their higher order thinking capabilities. Many research studies have proven that activity as a strategy has promoted achievement levels and some others say that content mastery is possible through active learning strategies.

Activity transforms students from passive listeners to active participants, helps the student understand the subject through inquiry, gathering and analyzing data through which solving higher order cognitive problems.

Gandhiji's Craft based education - " Knowing through doing" is one of the best example of Activity based knowledge getting strategies.

Discovery based knowledge getting strategies

Discovery based knowledge gettingrefers to various instructional designs that engage students in learning through discovery. The pedagogical aims are to

(1) Promote deep learning,

(2) Promote meta-cognitive skills (develop problem-solving skills, creativity, etc.),

(3) Promote student engagement.

Here learning takes place in problem situation. Learners get knowledge by discovering facts, relationships and new truth based on their experience. Discovery learning is a type of learning where learners construct their own knowledge by exploring , experimenting and inferring rules from the results of these experiments. The basic idea of this kind of learning is that because learners can design their own experiments in the domain and infer the rules of the domain themselves they are actually constructing their knowledge.

(Epistemological Bases of Education)

Psychologist and cognitive learning theorist Jerome Bruner (1967) first outlined the principles of discovery based knowledge getting. Similar constructivist learning theories were developed by John Dewey, Jean Piaget, and Lev Vygotsky, all of whom suggested that discovery learning encourages students to become active participants in the learning process by exploring concepts and answering questions through experience. Tagore's view of Real Education also has similar basis that Discovery and exploration on Nature creates new knowledge.

Society

A society is a group of people who live within a bounded territory and share a common way of life (Stockard –1997). Societies are characterized by patterns of relationships (social relations) between individuals who share a distinctive culture and institutions; a given society may be described as the sum total of such relationships among its constituent members. A larger society often involved in persistent social interaction, sharing the same geographical territory, typically subject to the same political authority and dominant cultural expectations.

Culture

Culture is the common way of life shared by the members of the society. The common way of life includes a complex whole in which knowledge; belief, art, morals, customs and laws predominate. In common dialect, culture is often used to refer specifically to the symbolic markers used by ethnic groups to distinguish themselves visibly from each other such as body modification, clothing or jewelry.

Social change

Social change is the transformation of culture and social organisation/structure over time. In the modern world we are aware that society is never static, and that social, political, economic and cultural changes occur constantly. There are a whole range

of classic theories and research methods available within sociology for the study of social change.

Social change has four main characteristics (Macionis 1996):

It happens everywhere, but the rate of change varies from place to place. For example, the United States would experience faster change, than a third world country that has limited access to technology and information.

Social change is sometimes intentional but often unplanned.

For example, when the airplane was invented people knew that this would increase and speed travel. However, it was probably not realised how this invention would affect society in the future. Families are spread through out the country, because it is easier to return for visits. Companies are able to expand worldwide thanks to air travel. The numerous crashes and deaths related to airplanes was not predicted either.

Social change often generates controversy.

For example, the move over the recent years to accept third gender rights has caused controversy involving the religion, and society overall.

Some changes matter more than others do.

For example, the invention of personal computers was more important than Cabbage Patch dolls.

Society and Modern Values (with special ref to Ambedkar)

1. **Equity** (=fairness)

2. **Equaity** (=sameness)

3. **Individual Opportunity** (=scope for nurturing individual potential)

4. **Social Justice** (= fair distribution)

5. **Dignity** (=worthiness of honour)

Equity and Equality

The terms equity and equality are sometimes used interchangeably, which can lead to confusion because these concepts are related, there are also important distinctions between them.

Equity, involves trying to understand and give people what they need to enjoy full, lives. Equality, in contrast, aims to ensure that everyone gets the same things in order to enjoy full lives. Equity aims to promote fairness and justice, but Equality can only work if everyone get the same things.

Let's think for a moment about runners sprinting around an round track during a sports competition. The concept of equality would have us treat the runners in

exactly the same way, ensuring that they the same place, same time, same weather on the track. On the surface, this seems fair.

But we know that runners in the inside lanes have a distinct advantage over runners in the outer lanes the distance they have to travel is shorter. As a result, equality – starting at the same place – doesn't fairness. The concept of equity, in contrast, would lead us to stagger the starting positions of the runners in offset the disadvantages facing those in the outer lanes. In this case, different starting path to fairness and justice than the same treatment.

Individual Opportunity , Social Justice & Dignity

Most of the societies we live in, are not effective in identifying and nurturing individual potential of citizens. As a result we keep struggling to secure the broad range of our talent. All the opportunities in the world can be of no use to a man who is not intellectually free to use them to his advantage. And a man who is not intellectually independent cannot create opportunities, or determine with any confidence which conditions and circumstances in his environment are potential opportunities (i.e., appropriate to achieving his goals). Individuals differ in the methods and standards by which they identify, evaluate and choose opportunities. The opportunities a man creates and chooses depend on the extent of his knowledge, context, interests and values. One's knowledge of the existence of opportunities does not guarantee that he can or will take advantages of them.

Social Justice refers to the fair distribution of wealth, opportunities and privileges within a society. Social justice ensures equity , equality and equal opportunities in accordance with democratic values. The broad area of social justice include   (i) Educational and Economic Development and Social Empowerment of Scheduled

Castes (SCs) (ii) Educational and Economic Development and Social Empowerment of Other Backward Classes (OBCs) (iii) Support to Senior Citizens by way of their Maintenance, Welfare, Security, Health Care and Productive and independent living (iv) Rehabilitation, through 'whole person recovery' approach, of victims of substance abuse. Social justice aims at building a society wherein members can lead productive, safe and dignified lives, with all their basic needs being fulfilled, and where equal opportunities are ensured for the growth and development for SCs, OBCs and adequate support and opportunities are ensured for Senior citizens and victims of substance abuse.

Dignity is the quality of being worthy of honour and respect. Human dignity is sacred and it must be respected and protected. The dignity of the human person is not only a fundamental right in itself, but constitutes the basis of fundamental rights in international law. The 1948 Universal Declaration of Human Rights enshrined this principle in its preamble: 'recognition of the inherent dignity and of the equal and inalienable rights of all members of the human family is the foundation of freedom, justice and peace in the world'. For this reason the dignity of the human person is part of the substance of any right protected by

international human rights law. It must, therefore, be respected, even where a right is restricted. Human dignity goes to the heart of human identity. Without dignity none of the protections of the various legal human rights mechanisms can have real meaning.

Multiculturism and Democratic Education

Multiculturalism is the phenomenon of the existence and promotion of multiple cultural traditions within a societies. Cultural diversity has been present in societies for a very long time. Modern societies remain culturally diverse, with most countries having a mixture of individuals from different races, linguistic backgrounds, religious affiliations, and so forth. Contemporary political theorists have labeled this phenomenon of the coexistence of different cultures in the same geographical space multiculturalism. That is, one of the meanings of multiculturalism is the coexistence of different cultures.

The term 'multiculturalism', however, has not been used only to describe a culturally diverse society, but also to refer to a kind of policy that aims at protecting cultural diversity. Although multiculturalism is a phenomenon with a long history and there have been countries historically that did adopt multicultural policies, like the Ottoman Empire, the systematic study of multiculturalism in philosophy has only flourished in the late twentieth century, when it began to receive special attention, especially from liberal philosophers.

Role of Multiculturism in Democratic Education

Democratic education is such education in which democracy plays a central role in setting up the goals and aims of education. Democratic education describes a system of instruction that attempts to foster cultural pluralism and acknowledges the differences between races and cultures. The goal is to help students understand and appreciate cultural differences and similarities and to recognize the accomplishments of diverse ethnic, racial, and socioeconomic groups, not just

the mainstream culture. Various cultures in a society merit equal respect, status, scholarly interest, and preservation. Different cultures or cultural identities can coexist peacefully and equitably in a unified society.

India is multicultural in terms of languages, religions and etnicity. According to the 1961 Census of India, there were 1652 indigenous languages in the country. Linguistically, the two main language families in India are Indo-Aryan (a branch of Indo-European) and Dravidian. Religiously, India has Hindus, Muslims, Christians, Sikhs, Buddhists, Jain, Jew and Parsi populations. In such a country, multiculturalism advocates the belief that students' life histories and experiences should be placed at the center of the teaching and learning process. The pedagogy should crop up in a context that is familiar to students and that addresses multiple ways of thinking. In addition, teachers and students must critically analyze oppression and power relations in their communities, society

and the world. To accomplish these goals, multicultural societies demand school staffs that is culturally competent, and to the greatest extent possible racially, culturally, and linguistically diverse. Staff must be multiculturally literate and capable of including and embracing families and communities to create an environment that is supportive of multiple perspectives, experiences, and democracy. Multicultural education requires comprehensive school reform as multicultural education must pervade all aspects of the school community and organization.

But there are challenges that multinationalism poses for democratic education. Despite the differences between multinational and multicultural societies, there is an important similarity in the challenge they pose to democratic education. In both cases, educators must cultivate a concern for human beings, whatever their nationality, alongside a sense of civic responsibility. Integrating these two aims, and coping with conflicts between them, is perhaps the most formidable challenge for the philosophy and practice of democratic education. We shall see that there is no justifiable way of escaping this challenge by falling back on either a purely cosmopolitan or a purely civic understanding of education.

Nationalism, Universalism and Secularism

Nation is a collective of larger group of people with common characteristics and attributes, including language, traditions, customs, mores, habits and ethnicity.

Nationalism is a shared group feeling that seeks independence for its culture and ethnicity.

Nationalism is a great democratic ideal which continues to live as the strongest force and continues to inspire struggle for national liberation in different parts of the globe. It stands for the nation-state and love for the nation-state, and advocates that every nationality has a right to have its own state. It maintains that every distinct human group possesses some special qualities which must be preserved and developed for the common good of humanity. This can be achieved only if that group is free to develop its own laws and institutions. Actually, the great ideal of nationalism—live and let live—has opened the gate of human development. This particular sense of unity has enriched the world's storehouse of knowledge by giving inspiration man to create newer arts, literature, fine arts, etc.

Universalism is a theoretical and philosophical concept of universal applicability. As society that calls itself Universalist recognizes universal sets if principles for most religions and accepts all religions. Belief of inclusiveness in humanity is the root of Universalism.

India is a country committed to universalism. This commitment is thousands of years old and can be well acknowledged and understood through India's ancient slogan of 'Vasudhaiva Kutumbakam'. Until today it is doing so. India's Culture along with its other unique and exemplary characteristics, of which adaptation

and universal acceptance are the foremost, has been drawing the attention of the whole world by opening the door of the Indian soil for each and every one, doesn't matter to which part or region of the globe he or she belongs. It was Indian Culture and its large scope that accorded protection to the followers of various faiths and beliefs of the world from time-to-time. This Culture opened doors for all to settle on the Indian soil and provided equal opportunities to them for development. This process started thousands of years ago and continued for centuries. Perhaps, such kind of exclusive and excellent work started in India alone.

Secularism is the principle of treating equality to religions by the state. Western Secularism keeps religions separate from the state. Indian secularism ensures equal participation of the state in all religions. Secularism essentially means that religion and politics should be kept in different spheres in society. Rligion in the private sphere and politics in the public. Indian secularism, on the other hand, means that this division is not that strict but the state is allowed to support religions equally. According to . N. Madan, secularisation ordinarily refers to the sociocultural processes that enlarge the areas of life, such as material, institutional and intellectual, in which the role of the sacred is progressively limited. Secularity, then, is the resultant of this process, and secularism is the ideology that argues for the historical inevitability and progressive nature of secularisation everywhere. Madan has done a sociological study on the crisis of

Indian secularism and the rise of fundamentalism. Madan sees religious behaviour as a reason for the rise of fundamentalism which has then caused the decline of secularism.

Social Change in context of Industrialisation

The social changes brought about by the Industrialisation were significant in terms of urbanization as well as new social classes. The bad living conditions in the towns can be traced to lack of good brick, the absence of building codes, and the lack of machinery for public sanitation. The factory owners' tendency to regard labourers as commodities and not as a group of human beings.

Working class

The Industrial Revolution created a new working class. The new class of industrial workers included all the men, women, and children labouring in the textile mills, pottery works, and mines.

Urbanisation

They needed nearer places and homes to live. Thus town near to factories developed. Women and children regardless of where they worked, had the most exploitative working condition . People flooded into towns and cities from the country side in hopes of finding jobs. Exclusive neighborhoods were build for wealthy bourgeoisie, while the working poor was forced to live in the ghettos. The poor were forced to tolerate intrusions even at the most intimate times. People were used to work and home being in the same place and it was normal

for parents and children to work together. Houses were built in rows or in squares with a common courtyard, in which there might be a water tap and a common toilet. When production was in demand, workers would work extremely hard for a long .

Social structure

Increase in standard of living eventually resulted from urbanization . Gap between wealthy and working class still remained enormous. Industrial and urban development made society more diverse and less unified. Diversity within middle class. Upper middle class: bankers, industrial leaders, large-scale commerce Diversified middle class: businessmen, professionals, merchants, doctors and lawyers. Lower middle class: independent shopkeepers and small traders.

Changing family structure

Shifting from country side to town created nuclear families. Larger Joint families consisting of all adults and their kinship broke into nuclear families . The nuclear families tend to exist in industrialized and commercialized societies where individuals trade money for labor, goods and services. With this transfer of money for labor and such, couples are usually able to be self-sufficient, not typically needing to lean on grandparents or aunts and uncles and such. Even as I say that, please remember we are speaking in generalities, focusing on the traditional cultural norms of the very modernized West. With the idea of a

nuclear family being rather familiar to most of us, we'll move on to the extended

family household.

Educational Objectives   Unit III

Educational objectives are statements that express the expected learning outcomes of the learners at the end of instruction.

Educational objective should be written for each subject/ course of the curriculum because they –

1. Specify what the students should learn to do and thus set the students' expectations.

2. Provide direction to the teacher in the selection of the most effective Instructional methods and instructional resources (materials and media) to be used during instruction.

3. Provide guidance to evaluate students' achievement.

4. Provide with a solid foundation for designing relevant activities and assessment.

5. Help to identify critical and non-critical instructional elements.

Taxonomic levels / Domains of Educational objectives

Beginning in 1948, a group of educators undertook the task of classifying education goals and objectives. The intent was to develop a classification system for three domains: **the cognitive, the affective, and the psychomotor.**

Cognitive: mental skills (knowledge)

Affective: growth in feelings or emotional areas (attitude or self)

Psychomotor: manual or physical skills (skills)

Work on the cognitive domain was completed in the 1950s and is commonly referred to as Bloom's Taxonomy of the Cognitive Domain (Bloom, 1956). Others have developed taxonomies

for the affective and psychomotor domains. The major idea of the taxonomy is that what educators want students to know (encompassed in statements of educational objectives) can be arranged in a hierarchy from less to more complex. The levels are understood to be successive, so that one level must be mastered before the next level can be reached. The original levels by Bloom et al. (1956) were in the order as : Knowledge, Comprehension, Application, Analysis, Synthesis, and Evaluation. Anderson and Krathwohl (2001) revised Bloom's taxonomy to fit the more outcomefocused modern education objectives, including switching the names of the levels from nouns to active verbs, and reversing the order of the highest two levels. The lowest-order level (Knowledge) became Remembering, in which the student is asked to recall or remember information. Comprehension, became Understanding, in which the student would explain or describe concepts. Application became Applying, or using the information in some new way, such as choosing, writing, or interpreting. Analysis was revised to become Analyzing, requiring the student to differentiate between different components or relationships, demonstrating the ability to compare and contrast. These four levels remain the same as Bloom et al.'s (1956) original hierarchy. In addition to revising the taxonomy, Anderson and Krathwohl added a conceptualization of knowledge dimensions within which these processing levels are used (factual, conceptual, procedural, and metacognition).

LEVEL	DEFINITION	ACTION VERBS
KNOWLEDGE	Student recalls or recognizes information, ideas, and principles in the approximate form in which they were learned.	Write List Label Name State Define

COMPREHENSION	Student translates, comprehends, or interprets information based on prior learning.	Explain Summarize Paraphrase Describe Illustrate
APPLICATION	Student selects, trans-fers, and uses data and principles to complete a problem or task with a mini-mum of direction.	Use Compute Solve Demonstrate Apply Construct
ANALYSIS	Student distinguishes, classifies, and relates the assumptions, hypotheses, evidence, or structure of a statement or question.	Analyze Categorize Compare Contrast Separate
SYNTHESIS	Student originates, integrates, and combines ideas into a product, plan or proposal that is new to him or her.	Create Design Hypothesize Invent Develop

EVALUATION	Student appraises, assesses, or critiques on a basis of specific standards and criteria.	Judge Recommend Critique Justify
		Ref : Bloom, 1956

Affective domain

Affective domain refers to attitudes, appreciations, and relationships. Affective objectives are designed to change an individual's attitude. It includes the manner in which we deal with things emotionally, such as feelings, values, appreciation, enthusiasms, motivations, and attitudes. The five major categories of the affective domain (after Krathwohl, Bloom, Masia, 1973) are listed from the simplest behavior to the most complex .

Receiving: Awareness, willingness to hear, selected attention.
Responding: Learning outcomes may emphasize compliance in responding, willingness to respond, or satisfaction in responding (motivation).
Valuing: The worth or value a person attaches to a particular object, phenomenon, or behavior.
Organization: Organizes values into priorities by contrasting different values, The emphasis is on comparing, relating, and synthesizing values.
Internalizing (characterizing): Has a value system that controls their behavior. Instructional objectives are concerned with the student's general patterns of adjustment (personal, social, emotional).

Psychomotor Domain

The psychomotor domain includes physical movement, coordination, and use of the motor-skill areas. Development of these skills requires practice and is measured in terms of speed, precision, distance, procedures, or techniques in execution. Thus, psychomotor skills rage from manual tasks, such as digging a ditch or washing a car, to more complex tasks, such as operating a complex piece of machinery or dancing. There are three popular versions of classification for this domain. One by Simpson (1972), then by Dave (1970) and the other by Harrow (1972).

The Simpson (1972) Classification

Perception (awareness): The ability to use sensory cues to guide motor activity.
Set: Readiness to act. It includes mental, physical, and emotional sets.
Guided Response: The early stages in learning a complex skill that includes imitation , trial and error.
Mechanism (basic proficiency): This is the intermediate stage in learning a complex skill.
Complex Overt Response (Expert): The skillful performance of motor acts that involve complex movement patterns. Proficiency is indicated by a quick, accurate, and highly coordinated performance, requiring a minimum of energy.
Adaptation: Skills are well developed and the individual can modify movement patterns to fit special requirements.
Origination: Creating new movement patterns to fit a particular situation or specific problem. Learning outcomes emphasize creativity based upon highly developed skills.

Ref: Simpson (1972)

The Dave (1970) Classification

Imitation — Observing and patterning behavior after someone else. Performance may be of low quality.
Manipulation — Being able to perform certain actions by memory or following instructions.
Precision — Refining, becoming more exact. Performing a skill within a high degree of precision
Articulation — Coordinating and adapting a series of actions to achieve harmony and internal consistency.
Naturalization — Mastering a high level performance until it become second-nature or natural, without needing to think much about it.   **Ref :** Dave (1970)

Guidelines for formulating Educational Objectives

An educational objective is a statement of what students will be able to do when they have completed instruction. There fore objectives should be - 1. Related to intended outcomes

2. Specific and measurable

3. Concerned with students

Educational objectives must include:

1.   **Performance or behavior.** What is the learner expected to be able to do or produce? This reflects competencies that will be learned in terms of performance. Performances and behaviors should be overt, observable, and measurable.

2.   **Conditions.** How will the competency or knowledge be demonstrated? This may include the specific information the learner should use, or listing the tools, references or aids that will be available to the student in demonstrating accomplishment of the objective.

3.   **Criterion or degree**. What specific set of criteria must be met to demonstrate mastery? This signifies a level of performance at specific condition.

Guidelines to formulate educational objectives

S pecific: Statement should be clear about what, where, when, and how much change in observable behaviour will be there.

M easurable: Action verbs should be able to quantify the target berhaviour.

A chievable: Learners shoulde be able to attain the objectives

(knowing the resources and capacities at the disposal of the community);

R ealistic: Target behaviour reflected in the objectives hould be realistic.

T ime bound: Stating the time period in which they will each be accomplished.

Special care to write educational objectives

1. Use appropriate action verbs that can be observed and measured as a

2. Use multiple statements and include a definite, measurable verb that signifies a demonstrable learning outcome in each case.

2. Make sure that each objective contains an intended behavior for demonstrating performance.

4. Strive for higher order thinking (analysis, synthesis and evaluation levels) when applicable.

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