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Levels of Knowledge

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The setting up of National Knowledge Commission on 13th June 2005 by a notification of the planning commission and its formal launching by the Prime Minister of India on 2nd August 2005 with the mandate to advise the Prime Minister on matters relating to institutions of knowledge production, knowledge use and knowledge dissemination is an inevitable initiative in the current context of Liberalization, Privatization and Globalization (LPG). More importantly in a Country with such large population, shifting targets of mere literacy to qualitative education, growing numbers of uneducated youth due to lack of employment opportunities and socio-cultural transformation due to urbanization have brought about a need for providing a direction to the Country in terms of what to achieve in the 21st Century which is being termed as “Knowledge Century”.

What is Knowledge?

Knowledge is a term, which is used widely and indiscriminately. Widely because every body is concerned with it and indiscriminately as there is no one definite universal meaning for that. It ranges from simple information to absolute mastery over any field of study or original contribution to the theory of Knowledge. For a common man if one does not have information of a thing he/she says that I have no Knowledge of it. Here it is lack of information, which is viewed as synonymous with Knowledge. Sometimes, if one does not understand a thing, it is said that one is not having Knowledge about it. Here it is considered as something which one knows but cannot analyze or explain the things properly. Still another meaning is when one speaks of oneself as ‘I am not a Knowledgeable person in this field’, it means one who has not reached a level of being ‘Very High in regard’ so as to be considered oneself as an authority in that field (such as art, education, religion, morality etc.). Hence, Knowledge is a term used with varied meanings depending on different contexts.

“For most of philosophical history, "knowledge" was taken to mean a belief that was justified as true to an absolute certainty. Any less justified beliefs were called mere "probable opinion." Philosophers often define knowledge as a justified, true belief. “In Plato's view knowledge is merely an awareness of absolute, universal Ideas or Forms, existing independent of any subject trying to apprehend to them. Though Aristotle puts more emphasis on logical and empirical methods for gathering knowledge, he still accepts the view that such knowledge is an apprehension of necessary and universal principles. Following the Renaissance, two main epistemological positions dominated philosophy: *empiricism*, which sees knowledge as the product of sensory perception, and *rationalism*, which sees it as the product of rational reflection”.

However, knowledge may in fact be defined as ‘*a unique imprint left by an individual for the advancement of the living beings either materialistic or spiritualistic*’.

Information versus Knowledge:

The present discussion is concerned with analyzing different levels of Knowledge on the basis of distinction between information & knowledge. It is intended also to mainly give an understanding as to what consists of Knowledge, and whether it can be classified in clear terms. In fact Information and Knowledge are not mutually exclusive and contradictory to each other. They rather enrich each other and lead to the perfect development of human potential. Information is the basis for knowledge and Knowledge grows as one becomes informed.

However, while layman’s terminology of Knowledge is confined to Information, Intellectual usage goes much beyond this to embrace Knowledge developed by the self, Creativity and Innovation etc., Though this kind of division of the functioning of human mind is nothing but simplifying of the complex process, it is quite relevant in the current context where we observe the increasing influence of information over knowledge.

Information, according to some educationists is considered as mere acquisition of facts or rote memory and Knowledge as a mental process that takes shape in the mind or an intellectual process, which has very little or nothing to do with outside elements.

Emphatically speaking the society is slowly drifting from knowledge-based society to information-based society and human beings have become transponders of information rather than repositories of Knowledge. This is mainly because of the revolutionary development of Information, Communication and Technology (ICT).

Through ICT tremendous progress has been made in all walks of life including education. *The death of distance loosens the grip of Geography. The cost of Communicating ideas and data is now distance-free, thanks to the Internet and to the dramatic change in telephone tariffs. The Combination of Mobile telephone, global positioning Satellites and a sort of instant messaging have also enables for fast Communication (Cairncross, Frances., 2001).* ICT has become indispensable and integral part of education system and has brought about a new debate as to whether Information is important or Knowledge. This debate is very important as whether we want to create Knowledge based society or a society in which only information is transmitted without adding up of any Knowledge.

Information should not always be an end in itself, but should also serve as means to the end of attainment of 'Knowledge'. Even our traditions speak of Vigyan (Science/Information) as an essential stimuli for the development of response i.e., Gyan (Wisdom/Knowledge). But in a usual classroom teaching teacher hardly adopts a process of innovative teaching, and confines himself to the syllabus prescribed. The main reasons for this may be the apathy of teachers, sometimes lack of necessary abilities, inability to spare time for each student, lack of necessary infrastructural facilities such as labs, equipment, library facilities, etc. This is automatically reflected on the students who are always encouraged to do the things in a stereotyped fashion, with complete attention for producing best results by obtaining good marks in the examinations as their main goal. As a result of this students acquire knowledge without understanding, have information but lack the skills to apply them, and even know what is happening in the other corner of the world, but do not have an understanding of their immediate surroundings.

There is so much hue and cry in the education system (in India and elsewhere) mainly because our present Society is governed by the process of Education whose fundamental philosophy is “Whatever is learnt has to be tested”. This has advanced further and now the pragmatic ideal of Education has become “Whatever is to be tested should only be learnt”. From these two statements the derivation could be “Whatever is not tested is irrelevant”. This has made all knowledge of ingenuity as a fallow land, which goes unnoticed. The development of creativity, though is an individual task, requires the support of society. With a positive and encouraging approach, we can allow the budding talent of creativity to take a full shape. The direction of student’s progress is largely in the hands of parents, teachers and educational administrators. However, in the recent past as our focus is confined to the development of only Intellectual & Scientific abilities, the importance of Creative thinking, Social leadership and talent in fine arts etc have received negligible attention. As a result of this there is a lop-sided development of human abilities.

This is because, in the fast changing world, many students don’t have time to think, but to act on information. Most of the students of present generation after all, have hardly any time to process the information, lest been understood. The cramming of information by the students before the examinations is a best example for this. However “*Ideas which are not utilized are positively harmful. By utilizing an idea, I mean relating it to that stream, compounded of sense perceptions, feelings, hopes, desires and of mental activities adjusting thought to thought, which forms our life*” (Whitehead N, *Alfred.*, 1949). But at present information has become an instrumentality in survival while knowledge cannot. This is because many students feel that accomplishment in examinations is everything, and more so than obtaining knowledge. In the growing materialistic world even spiritualism is being treated as a commodity of information, the way it is publicized and marketed that it is often felt that it can also be purchased at a price.

Some Educationists often see the Information explosion with awe. If we try to understand and analyze why this is so, it may be due to the following reasons.

1. The amount of information is very large then required. The information Society has made it possible for collection of large amount of information. The volume of information is so huge that it becomes a mental and physical burden to the student.
2. It does not permit the student to think. There is very less scope for understanding the information to analyze and apply one's own mind because the quantity is large.
3. Most of the information is not useful to the students and goes unused. But at the same time it preoccupies students mind.

Is all knowledge developed by a man when transmitted becomes Knowledge. No, it may not be possible. All knowledge cannot be transmitted as information and also all information may or may not lead to development of knowledge. "A merely well-informed man is the most useless bore on God's Earth. What we should aim at producing is men who possess both Culture and expert Knowledge in some special direction". (Whitehead N, Alfred., 1949). If a person to whom the information is transmitted can undergo the experience of knowledge then it is possible that knowledge can be transmitted as information. One cannot by merely reading the principles of Buddha become a knowledgeable or enlightened person. What one needs do is to practice them to perfection. Hence all knowledge cannot be transmitted through information as knowledge, because the essence of experience is involved in it.

Why knowledge cannot be transmitted as information because:

1. It cannot be comprehended fully. The Knowledge which one acquires through hard-pursuit of it cannot be fully comprehended by others, as the process through which one acquires when transmitted as information to others will not have the same level of comprehension in them as the original Knowledge developer has.

2. Even if comprehended others do not undergo the same process as original developer of Knowledge has gone through, because the path is known.
3. One has got clear direction in terms of understanding the process hence there is no originality. One knows the methodology to reach the desired end.
4. One does not have to search for the answers, as one gets ready made or solved problems.
5. One knows the results and there is no curiosity about the end product. One will not have the same vigor because one knows how the ends are to be achieved.

Why Knowledge is considered as important because:

1. It is unique. The Knowledge which has come out of one's own pursuit for it in any field will certainly be a unique contribution to the Society.
2. It provides solution to the problem of humanity. As most of the Knowledge is in pursuit of solving the problems that the Society faces, any kind of Knowledge developed in that direction will certainly lead to the benefit of the Society.
3. It develops within mind and helps the individual to self-actualization. While Information also empowers Individual, the level / amount of satisfaction that one acquires which leads to self-actualization can come only from the Knowledge that is developed from one's own mind rather than collection of information and/or developing an understanding about it.

Types of Knowledge:

Knowledge can be of two types:

1. Materialistic Knowledge (Excellent Attainment). The Western concept of Knowledge, which is related to development, and takes place to further the cause of materialistic achievement, is one kind of Knowledge.
2. Spiritualistic Knowledge (Development of Soul). The development of Soul in which the things beyond materialistic life and existence are given importance.

Classification of Information in relation to Knowledge:

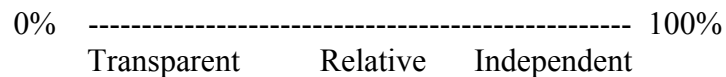
Knowledge philosophically is distinct from simple information. Both knowledge and information consist of true statements, but knowledge is information that has a purpose or use. Philosophers would describe this as information associated with intentionality.

$$\text{Knowledge} = \text{Information} + \text{Intention}$$

On the basis of the above the following classification can be made based on different types of intention, levels of comprehension and ingenuity.

1. Transparent Knowledge (Information devoid of Knowledge)
i.e., Information + Deviant Intention (unorganized collection of information in bits & pieces, ignorance, lack of interest, different goals etc.,)
2. Relative Knowledge (Information intertwined with Knowledge)
i.e., Information + Intention + Comprehension
3. Independent Knowledge (Knowledge beyond the realm of Information)
i.e., Information + Intention + Comprehension + Ingenuity

However, the above classification cannot be considered as independent entities. They are on a continuum and if all the three are to be placed on a scale of attainment of Knowledge of 0-100 percent then it can be shown as below.



Though absolute Zero and absolute 100 do not exist, as any information will not be absolutely transparent, there will be a certain amount of retention. While Independent Knowledge can never be 100 per cent, as it will also have the impact of previously accumulated information and information related understanding.

Transparent Knowledge (Information devoid of Knowledge): Under this Knowledge is considered as transparent because it comes in and goes out with hardly

any retention. Acquiring information i.e., acquisition of facts is considered as a reflex action, which does not require any thinking process. “*Knowledge is an **appreciation** of the possession of interconnected details, which in isolation, are of lesser value*”. But in Transparent Knowledge things are often learnt in isolation or in disconnected fashion. For example things, which are learnt in rote memory, would remain in memory in separate blocks and unless they are linked together they cannot be comprehended. As long as repeated recollection or memorizing of the things take place, they are retained and once when it stops automatically they are removed from the memory. In simple terms, the processing of information that takes place as follows:

Input ↔ Output

Here one can see that there is a two way direction of arrow between input and output which means, things are received and reflected like rays without any kind of processing involved in it. The best example for this is rote memory through which things are recollected. This is what is leading to transparent Knowledge, in the world of information revolution. Because the things are not taught in relation to each other but presented to the student in abstract terms. Transparent Knowledge does not involve in looking at the things with body, mind and soul put together. In the modern educational system there is an enormous predominance of this information loaded teaching-learning-evaluation pattern. It makes the student breathless in acquisition of facts and leaves no room for their comprehension. In this process the students are treated as audio or videotapes, which are used for recording and replay.

The transparent knowledge is not to be confused with memory because in memory only biological process is involved whereas under knowledge, it is intention, which is a social act that plays a dominant role in addition to the biological activity. In case of transparent Knowledge the purpose of acquiring the information is not with the intention of fulfillment of the objective, but something else. For example if a student collects a piece of information, not with the intention of developing an interest in that or further processing of it but to satisfy the teacher by reproducing it so that he gets a good impression of the teacher, he is acquiring transparent Knowledge.

The purpose of acquiring such Knowledge is mainly to serve the immediate purpose rather than the ultimate aim of attaining still higher levels of Knowledge. Another example is if a student intends to score good marks in a subject of study, and strives to pursue that with more emphasis on obtaining marks than acquiring competence, he/she is not interested in acquiring the real Knowledge. His ultimate aim is a goal, which is different from that of the real goal, set by the society i.e., developing an understanding about a particular subject. Here goal (acquiring Knowledge) becomes subservient to means (good marks), and means has become goal. Marks are means because they indicate the level of performance of the students.

Though it is true that mere acquisition of information would always not solve any purpose either in education or real life, but that should not undermine the abilities that can be acquired by the students through information. From times immemorial verbal recital has been ingrained in our Culture. There are occasions, when one even does not understand the meaning of a verse still one may enjoy it. That does not mean that one should not attempt to try to understand the meaning of it. That also means that one should not simply stop reciting a verse because he does not understand the meaning of it, as one can do it at a later date. This is possible only when one can receive the information and store it. (This may be compared to the cow eating stalk and later when it is free, chewing it so that it could be digested fully.) Otherwise also further processing of the information can be done later by others also. The inquisition comes only when one has information and otherwise not.

Western philosophers have distinguished between two kinds of knowledge a priori and a posteriori knowledge. “A priori knowledge is knowledge gained or justified by reason alone, without the direct or indirect influence of experience (here, experience usually means observation of the world through sense perception.)”. Most of the Priori knowledge is nothing but Transparent Knowledge because this is not experienced by the people, but at the same time it can also lead to the higher levels of Knowledge.

Relative Knowledge (Information intertwined with Knowledge): Unlike in the first category here Knowledge and Intention go together and that's why it leads to the development of relative Knowledge. Also, under this Knowledge revolves around information and it is relative to the information acquired. There may be instances where it becomes highly difficult to differentiate between what is information and what is knowledge, and that falls under this category. It is a situation of synthesis of the two or it may be an instance where it is not possible to see them as independent entities. There is no complete detachment between Information & Knowledge, as we find in the above-mentioned first category and at the same time Information is not absolutely independent of its existence of the domain of Knowledge as it is observed in the third category.

“The posteriori knowledge that is, knowledge the attainment or justification of which requires reference to experience” (called as empirical knowledge) can also be termed as relative knowledge. This can however lead to Independent Knowledge, but not in itself is Independent Knowledge. The processing of information may be explained as follows:

Input ↔ Simple Processing ↔ Output

Between input and output there is simple processing involved which leads to the comprehension of facts and that's how it is different from transparent Knowledge. But this processing does not go beyond the level of comprehending what is present and that's why it cannot reach the level of Independent Knowledge. But it is a step in right direction for the attainment of Independent Knowledge.

Independent Knowledge (Knowledge beyond the realm of Information):

All Knowledge received by an Individual cannot become Independent Knowledge. It can either become transparent Knowledge (if the student to whom it is transmitted does not bother to understand that or fails to understand due to the reasons mentioned above) or relative Knowledge if the student concerned can have a full understanding of the process, and/ or even when it is practiced. It cannot go above and beyond these two levels. The development of Independent Knowledge is where human ingenuity comes into play, which can have any number of its expressions. It is independent from the information

and does not have close relation with the information. Though under this category, information too has some influence but it is highly negligible and remote. The ultimate goal of any educational system should be the pursuit of this objective i.e., to bring about the excellence out of each individual. As each individual is a unique creation, there is always scope to extract the best out of every one. The system of Education should not stifle the individual's growth but become a conduit for the expression of oneself. The information processing under this category may be explained as follows:

Input → Complex Processing + Unique development → Output

Under this the processing is not very simple to understand the things but a complex one to find solutions for what is not present. This complex processing may also lead to the development of unique ideas/innovations/discoveries/anything of original nature for the advancement and/or well being of the individual/society either materialistic or spiritual. This should be the ultimate goal of the system of education.

The development of Independent Knowledge among students is also necessary from the point of view of well being of the individual, Society and Nation because otherwise Knowledge becomes a monopoly of few. The monopoly of knowledge through patents can be very disturbing and it questions the very survival of common man and puts his life at stake, unless the generation of knowledge and consequent distribution of it is not taken care of. The issue of whether innovation justifies a certain amount of monopoly was a point raised most strikingly by the Microsoft case. In October 1998, America's Department of Justice launched an anti-trust case against the World's largest Software Company which resulted, in April 2000, in a ruling that the Company was an "abusive monopolist" that should be broken up. (Cairncross, Frances., 2001).

The above three principles of knowledge (transparent, relative and independent) can be applied to any thing under the sun, such as life of Buddha to laws of Newton who formulated the concepts of Kaivalya and theory of gravity respectively. To illustrate how the above three levels work on an individual, the life of Buddha can be cited. Siddhartha (Gautama Buddha) who led a life of comfort and luxury when went with a charioteer

for an excursion from his palace he saw an old man, a sick man and a dead body in succession. When he asked his charioteer the meaning of the sight he had witnessed for the first time in his life, the charioteer said 'This happens to all men'. Here comes the transparent Knowledge of the charioteer, and to a great extent most of the people who witness such events. They are simply brushed aside (ignored) as part of life, which need no importance. The events enter mind and disappear.

However the conversation with the charioteer had a tremendous effect on the mind of the young man, and brought about a sea change in his outlook on life. This can be defined as relative Knowledge, as for Buddha the information did not disappear, but the thinking process went on around those very events. Many people reach this stage also, but Buddha underwent the third stage i.e., Independent Knowledge stage, as he renounced everything and after undergoing different kinds of self-torture attained *Enlightenment* or *Bodhi*. He discovered the 'Law of Dependent Origination' a cycle of twelve causes and effects that conditioned the world. This law is the special contribution of the Buddha, never expounded by any other sage or philosopher hitherto.

The above story describes how the information of the suffering did not become a mere transparent Knowledge, but revolved in the mind (Relative Knowledge) of Buddha and ultimately led to the development of Independent Knowledge. To put it alternatively, the thinking of Buddha was different, rational and unique. The process of Education would be complete only when all the three find their place in teaching-learning-evaluation of a student. However to attain the third objective the best technique is not to impose anything in a didactic manner at all, so that student gets full independence in doing the things. However, the present state of affairs in which the first category (Transparent Knowledge) gets all most the full priority over the other two is the most deplorable fact of life, which needs to be addressed and redressed for setting a balance among the three objectives. This will also help in elimination of huge load (both physical and mental) on the student. Otherwise the plight of the student will be no different from that of any search engine like google, serving as an instrument for retrieval of information.

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