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Evolution of Education and Quest for Efficacious Propounds

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Abstract

Education, evaluating from say Paleolithic age, has been basically, a process of mental growth, development of mental vision, and creation of readily interactive data & information banks of widely different spectrums within the brain by continuous & multi -lineal interplay, observations, reading & learning exercises, so as to achieve Competence, Success and Excellence & to embellish the Human values, Communication skills, Culture & Behavior, Family, Society, Nation, Humanity & Civilization. The influencing factors are mainly Heredity, Environment, Religion, Eclecticism, Family & Social Life, Economic Status, Media etc & ones own Intelligence. There have been visible paradigm shifts, in Curriculum, Accreditation, Teachers Qualifications et aldue to e –Learning and there is a need to efficaciously manage the Changes

Keywords: *Evolution, Perspectives, Attritributes, Curricula ,E-Learning, Reform.*

1. Defining Education

1.1 Education is a word used by one & all – even by illiterates, although, the mental perspectives are appreciably different from person to person - ostensibly, all the more, amongst the very Teachers. It may be desirable to look at few Dictionaries which, usually, provide guidelines and explanations in understanding a word.

1.1.1Chamber: 'the process of teaching. 2 the instruction received. 3 the process of training and improving (one's taste etc)'

1.1.2. Oxford: 'the process of receiving or giving systematic instruction, especially at a school or university: *a course of education,* the theory and practice of teaching: *colleges of education,[count noun]* a body of knowledge acquired while being educated: *his education is encyclopedic and eclectic,* information about or training in a particular subject: *health education.*2 (an education) an enlightening experience: *Petrus is a good workman—it is an education to watch him'*

1.1.3.The Random House Dictionary of the English Language : 'The act or process of imparting or acquiring general knowledge, developing the power of reasoning and judgment and generally of preparing oneself or others intellectually for mature life. The act or process of imparting or acquiring particular knowledge or skills as for a profession.'

1.1.4. The American Heritage Dictionary of the English language:' The act or process of educating or being educated. The knowledge or skill obtained or developed by a learning process. A program of instruction of specified kind or level; driver education: a college education. The field of study that is concerned with the pedagogy of teaching & learning. An instructive or enlightening experience. *Her work in the inner city was a real education.*

1.2 Millions of years had passed before these explanations which generate an array of questions by themselves – in fact every word in it, have taken the current shape.

1.3 The Education, is basically, a process of mental growth, development of mental vision, and creation of readily interactive data & information banks of widely different spectrums within the brain by a process of continuous & multi -lineal interplay, and of course, observations, reading & learning exercises & effectively in achieving Competence, Success and Excellence & enriching Communication skills, Culture & Behavior.

1.4.The perspective & evolution of Civilization, in some way or the other, - emphatically the human values –

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affection, tolerance, compassion, empathy, mutual respect, social discipline, scientific thought, innovations & inventions, et al – those generated through the evolutionary process over hundreds of millennia, should get impregnated in every bit of thought process and behavior.

1.5. The Education should impart a power – a thought process – mental Development, conducive to the World around, build a personality that should enrich ones' inner & outer self, provide capabilities for survival, - strength to contribute, in some way or the other to the cause of the Civilization & Humanity.

1.6. The Environment – both physical & mental, has ever been changing and the Education should provide a kind of mental balance to adjust.

1.6.1.These interactions are usually, complemented by a process of silent observations in and around, of the nature, weather, sky, behavior of human beings, in fact anything and everything around, inciting a thought process & providing a process of learning.

1.6.2 In fact, the very process of reading & exercises generate continuously, a thought process of wide spectrum – may be somewhat incoherent, and creates a never-ending parallel learning & questioning processes – even a forgetting process, if not practiced regularly..

1.6.3. The day to day communication is yet another important process of learning that influence the behavior of an individual, his ways of conducting himself, in the process that starts from the laps of the parents and people around; then, there are Toys, .Play grounds, Class rooms, Cinema, Radio, TV, Propagandas, Advertisements, Political slogans et al, some of which, of course, may not be conducive to be a healthy social being. But the process of learning is continuous and lifelong.

1.6.4. It must be recognized side by side that the worth of the Education has a direct bearing in placement in life, the position attained, and capabilities to discharge the duties & responsibilities as a family member, social being, official and of course a responsible citizen.

1.7. The organized Education of today, irrespective of standards & quality has a sort of Classroom, Methods, Curriculum, a set of Teachers and of course Laboratories for Science subjects and in addition, Laboratory, Drawing Hall &Workshops for Engineering subjects.

1.7.1. It is however important to recognize the problems & complexities, - some are of permanent nature. Intelligence – another term difficult to readily define, is closely related to Education – one's learning & assimilation processes, and is a critical trait for the success of an individual, of course when optimized with attitude, devotion and conducive environment.

1.7 2. It must also be recognized that the process of educating is a culmination of innumerable parametersof different scales, numbers, shades, impacts of ever changing nature – expect those belonging to basic scientific issues and no conclusions should be drawn from any particular parameter even a group of them.

1.7 .3.There has been, further a continuous thinking and rethinking as to the Courses and Curricula, Modes and Mediums of Teaching, Accreditation Standards and the very Government policies, - changing from time to time. Effectiveness is also assessed.

2. Evolutionary Process

2.1. In the very primitive days, - Paleolithic or Old Stone age, Man used to move around in daylight, and hide in caves or trees for rest, and for protection at night. The shadows, it was learnt, were the simplest ways to identify Morning, Noon, Evening, & and the Morning next & gave the concept of a Day. This, ostensibly, speaks of the most fundamental level – the basic analytical and assimilating background – interactive process of Education.

2.1.1.Man slowly came to understand the Seasonal Cycles, Ageing in terms of Days, Nights, and Moon Months, ultimately, Years, In the evolutionary process – may be when man learnt to communicate, - may be about 100.000 years back, Tribes were formed, to haunt in an organized fashion – the first working example of *Management*

2.1.2. The Education of survival was initially based on mimicry, and it had a big jump- slowly of course, when Language took a shape and a still bigger jump when expressions could be put in mutually understood Writings.

2.2. How Man behaved differently from the other animals who remained where they were, although, some of them are comparable even superior, to human beings, as will be evident from the following table (*Mind Children*) which provides a straightforward answer in its coordinated & complementary efforts of survival (as elaborated earlier) and of course, the unique quality in the Brain that made Man a MAN – the power of Logical thinking, complimentary and coordinated effort – basic features of Education

Animal **Brain Mass (grams**)Neurons Power Bits/ Sec.Capacity in Bits

6 88
Snail-10 10 10

699
Bee- 10 10 10

7 10 10
Humming Bird *0.1* 10 10 10

8 1111
Mouse 1.010 10 10

11 1414
Human150010 10 10

11 1414
Elephant 30002 x 10 2 x 10 2 x 10

11 14 14
Sperm Whale 50005 x 10 5 x 10 5 x 10

2.3.The Primitive Education – the first one, ostensibly, started with the formation of Tribe which speaks of three basic lessons of survival – organizing supply of food, coordination & mutual respect, clothing &.shelter, and placating interpretation of the environment – animism and of course sagacity

2.3.1. 'My son, dig the vineyard' were the last words of the old man in the fable though the sons found no treasure, they made their fortune by grapes (T. H. Hudey) ; the Ants also function on teamwork so also even Elephants & Sperm whale who have some superiority in brain power, but they remained where they were but man progressed.

2.3.2.The Archeological records of Civilization show the Human Development through the evolutionary process – the skills of human beings in out-performing the performance – even exploitations & enslavement of other species, through a process of evolution or, was there was any special big bang type of event that provided man with innovative intelligence, powerful enough to build the Civilization.

2.3.3. This question is not the topic of discussion, but being raised to appreciate Intelligence which is the essential ingredient for the overall perspective of Education. Our own species, *Homo Sapiens might have kept its first step around 100,000, years back.*

2.3.4. The History of Education, incidentally, tells the accruing processes of innovations that has been continuously promoting the arts of living, preservation learning structure, though it builds new kinds of expectations, even wants

3. Theories of General Education

3.1. The Theories of General Education -the Quality & the Academic contents of Undergraduate Education, in different Standards, has always been a matter of debate for Educationists, Parents & Guardians, Officials as well as Planners of Curriculum – in fact, one & all.

3.1.1. The center of debate is mainly focused on General Education, but little of it has articulated the philosophical presuppositions of general education programs.

3.1.2. The problem of this work is to articulate the philosophical presuppositions of the major approaches to general education in some places. and to suggest a ground from which to assess them critically.

3.2. The procedures used are both historical-hermeneutic and critical. In articulating the four major approaches to general education (the Idealist, the Progressive, the Essentialist, and the Pragmatist), the procedures are historical and hermeneutic.

3.2.1. In developing a critical theory of general education based on the critical theory of Jurgen Habermas, the procedures are both historical-hermeneutic and critical.

3.2.2. The work provides a theoretical ground from which further empirical research may be conducted, as well as making the critical theory of Jurgen Habermas accessible to curricular reformers.

3.2.3. The study further suggests ways to evaluate general education programs and suggests a new focus for curricular reform: communicative competence based on the traditional ideals of free speech and the "good life'

4. Educational perspectives

4.1. Heredity Environment & Education

4.1.1**.** Heredity has a role in the process of learning, but yet there is no way to quantify the process.

4.1.2**.** While it is expected that a child born of highly educated Parent, will equally be proficient in learning, this has not found to be necessarily true.

4.1.3**.** Environment also plays a big role in the development of the mental process and attitude. There have been cases of extraordinary achievement, though there has not been any support from the heredity but where there was enough of inspiration from the environment.

4.2. Philosophy of Education

4.2.1.Philosophy of Education is a field, associated with Education, of Applied Philosophy, evolved from the *traditional fields* of Philosophy, like *Ontology*, *Ethics, Epistemology* etc. and its approaches eg. Speculative Philosophy, - *Prescriptive, and/or Analytic*, to address questions regarding *Education Policy*, *Human Development,* and *Curriculum Theory*, - to name a few.

4.2.2. Philosophy of Education is also the *philosophical study* of the Purpose, Process, Nature and Ideals of

Education & segments of the values and norms revealed through Upbringing and Educational practices,the limits and legitimization of Education as an *Academic Discipline*, and the relation between Educational Theory and Practices –including their dichotomy.

4.2.3. Philosophy of Education is, in fact, a branch of both Philosophy and Education. The multiple ways, usually linked to conceiving Education is interleaved with the multi-lineal fields and approaches of Philosophy. Philosophy of Educationthus becomes a diverse field that is not easily defined. Philosophy of Education need not be conflated with Educational theories, which are not confined to the application of Philosophy to Questions in appreciating the canvas of Education.

4.2.4.The Philosophers all over, have been rethinking as to an efficacious structure of Education for the current millennia, and looking for an appropriate place as an *academic discipline, though* it is an internationally well-established field, with Departments and Programmers all over the world.

4.2.5. The contributions made by Plato, Aristole, Avicenna, Ibn Tufail, Thomas Aquinas, John Milton, John Locke, Jean-Jacques Rousseau, Friedrich Fröbel, John Dewey, Rudolf Steiner, Maria Montessori, Jean Piaget, William Heard Kilpatrick, William Chandler Bagley, Jerome Bruner, Harry S. Broudy, Maxine Greene , Paulo Freire, Nel Noddings, Allan Bloom and others will help in crystallization of the thought-process.

4.3. Sociology of Education

4.3.1. The *Sociology of Education and Human Social Development* yet. have alsoimportant role in the development of human minds.

4.3.2**.** It is relevant to examine how social institutions and individuals' experiences within these institutions affect educational processes and social development. Such research may span various levels of analysis, ranging from the individual to the structure of relations among social and educational institutions

4.3.3**.** In an increasingly complex society, important educational issues arise throughout the life cycle and it may be efficacious to examine all stages and all types of Education at the individual, institutional, and organizational levels

4.4. Religion & Education

4.4.1 Religions play an important role – of varying degrees, depending upon the cultures of the family & environment, in the growth of mental framework.

4.4.2. Every religion, as common features, have, the following features which do influence the learning process & behavior of an individual, lifelong.

1) Religious Scriptures
2) Number of enchanting stories
3) Festivals
4) Codes of conduct
5) Totems & Taboos

6) The politicalization & diverse codes of Religions also influence the mental make up, attitudes for learning, even act as the driving force.

4.5. Eclecticism, Totems, Taboos & Education

4.5.1**.** There have always been mental exercises in choosing out the bests or most useful pricinples and ideas from different concepts and beliefs, rather than one complete set of ideas or beliefs those should be segments of learning. Educational methodologies usually drew upon eclectic interfacing of different ideas those generated from time to time.

4.5.2. The values, social customs, even codes of conducts those influence areas of learning & behavior have also been influenced by religious totems and taboos over centuries ^centuries.

4.5.3. These areas basically fall in the areas of informal learning, mostly induced by family and society.

4.6. Family, Social Life, & Education.

4.6.1. Family juxtaposed with Social life & Environment, plays a great role in the process of Learning,.

4.6.2. Where parents – at least one of them, devote enough time with the children- rather, they mutually enjoy the company of each other, the process of learning becomes smooth & result oriented with long lasting results. There should be rich, inspiring, stable Home learning environment, & care so as to enrich home learning and homework, as also self-esteem. It is important that they talk about Values, including those the child has already built up.

4.6.3. Parents should interact & cooperate with the Teachers, understand their viewpoints and take active interest in in the School work. They should conduct as Partners, Collaborators, Problem solvers, Supporters, even Advisers & Co-decision –makers, though the opinions of too many people may confuse the issue

4.6.4. Parents have a big role in building strong moral values and Ethical conducts; they have also a big role in development of the skills of logical Decision – making.

4.7. Role of Economic Status in Education;

4.7.1. There are wide differences in the structures of the Schools from place to place and these differences can be readily noticed in the campus with impressive buildings to

huts, education & salary , even family backgrounds of the teachers - of bare footed teachers, facilities in the schools like lights, fans, even air-conditioning to even no electricity, modern laboratories to no such facility and of course wide differences in the economic status of the students. All these factors do influence the process of learning, even the thought process.

4.7.1.1. Nevertheless, the conceptual structures &foundation play vital roles and the ambition generated in the course of learning.. Two friends of low income group were the students of a School that had class rooms built on earthen floor, walls made of bamboo strips & roof with tin, & with no electricity and most the teachers bare footed, half fed and did not have much of higher education.

4.7.2. Arising out of the Partition, both the families migrated to Calcutta and both of themgot admission in two topmost schools and later in the number one Engineering & Medical Colleges respectively of the Country.

4.7.2.1.One of them had succeeded in getting one of the most prestigious jobs through tough UPSC Examination and the other one became one of the most well-known surgeon in the USA.

4.7.2.2. As a Fellow of the United Nation, the former one was deputed to USA and while in the costliest Car driven by the Doctor, the former had prayed:' Had there been a time machine, we would have gone back & touched the foot of those poor teachers to pay regards to those dedicated souls.

4.8. Media & Education

4.8.1. *The Media* (in the order of $ 500 billions, and ever increasing), suffers from repeated, superfluous, & even *counterproductive broadcasts* and is in *hand in hand with Advertisements* whose financial benefits – the tangibles, have been again reaching mainly the *creamy layers* whereas the minds of Children & Adolescents are seriously affected by all these programs & the burdens *are,* perforce, *borne by one and all*

4.8.2. The parents should make use of the useful aspects of media and ensure the turning off the rest. The important events, particularly, tragedies & calamities are continuously, milked by one & all and *it may be difficult to determine where Reporting ended, & Advertisement begin – nay the minds of children.*

4.8.2.1. At one time it was felt that film, radio.& television- even instructional television –ITV, would generate substantial reform in education which in no time was found to be wrong and misleading.

4.8.2.2. With the erstwhile Social cultures waning, the people are spending most of the free time with Media.

4.8.3. There is as such hardly any sacrosanct values in the broadcasts whereas children & adolescents absorb lot of ideas, not as such conducive to the the basic ingredients of education where the parents, guardians have a role to play in screening the process.

4.9. Educational Ends

4.9.1. The process of learning is lifelong. There are areas which undergo revaluation & redefining during the Journey

4.9.2. There is no line to define the End and the areas of interests go on burgeoning, in some cases may be changing. It is important to inbuilt sagacity- though again it may not be possible to point the time of start. An infant pointing out the tiny figure shows the Eagerness to learn, something unknown so long.

5. Attributes to Learning

5.1. Intelligence and Education

5.1.1. Notwithstanding intensive researches and discussions over decades and decades, no perspicuous definition of Intelligence that is universally accepted, is still available.

5.1.2.During the processes of evolution,- always in flux, over millions of years that caused changes in environment and culture , the human species had undergone rapid mental and physical change particularly over say last two hundred years – all the more over the last three decades..

5.1.3. With the fast **multi-lineal advancements in the Euthenics, demands** on the human brain, have simply, been multiplying, consequently, the spectrum of intelligence needs a more in-depth study.

5.1.4.Nevertheless, our mental agility and unique thought process that make up our Intelligence, is *fundamentally*, the ability to understand, learn, think and interact, and is the key to our overall Power.

There are, ostensibly, some inherent faculties like common sense, initiative, ability to adjust, comprehend and judge which constitute ingredients of Intelligence which is of course, influenced by Family, Society, Teachers & Education, and Political and Physical Environment, as also Heredity.

5.1.5 It is also important to appreciate the ***difference between ones Knowledge and Intelligence***. In fact, one more distinction *which is usually ignored*, needs appreciation that the difference between Information and Knowledge.

5.1.6 Intelligence has many parameters which may have to be considered individually for measurements, in any

case, all assessments and measurements will lead us to '***Subjective Intelligence'***

5.1.7To appreciate ***quantitatively*** the differences in Intelligence from person to person, it was in early 1900s Binet invented IQ= 'Intelligence Quotient' Tests, which unfortunately, suffers from the beliefs. Interests & experience. In fact, due to the very parameters deployed for measurement and comparative achievements, it is not possible to compare two persons and specifically state that one is more intelligent than the other. One of the geniuses India produced Ramanujam, failed in all the subjects in Inter – Science examination and in all probability, his performance would not have been better had he been subjected to IQ tests..

5.1.7.1. At present, an IQ of 100 is usually rated as Average and above 150, in the scale of genius.

While there is a correlation between IQ test performance and Job status, there is as found , low correlation between IQ test result and performance. Then the Infants who does not get Mothers Milk, reportedly score less in IQ test later in life, and naturally, should get special attention in their upbringing.

5.2. Development of CURRICULA

5.2.1. Key Skills

5.2.1.1. There are basically Seven skills, enumerated below which are the foundation of Education & conducive to improvement of learning & performance in Education that would largely influence Work and Life of 21st century.
5.2.1.2**.** Due attention has to be given to the **acquisition of higher order thinking and problem solving skills.**
5.2.1.3 The emphasis usually given to assimilation of voluminous isolated information & facts, may be given less importance.
5.2.1.4. Basic skills should not be taught in isolation.
5.2.1.5. Information Resources to be used only when those are needed.
5.2.1.6. The students should be inspired to play a central role in building his knowledge and skills.
5.2.1.7.The Curricula should be structured accordingly
5.2.1.8. The Behaviors of every student must exhibit respect to basic norms, practices as also Social issues and should be conducive to developments of affectionate & respectful Interpersonal relationships

5.2.2. Key Skills Identification

5.2.2.1.Communication : This is gaining more & more importance in the *talkative World* and needs basically a quick retrieval of Information and Data, Reasoning and good command – both eloquence & elocution in English & other languages, a person needs to know, and of course, an alertness as to the topic, - its perspectives & implications.
The basic complements are: Speaking, Listening, Reading, Writing, Reflecting, Analyzing and Comprehension in totality – duly intercalating scientific logic and data; emotion and sentiments are essential ingredients of life and living and naturally, have a place of importance. There should be continuous efforts for Growth & Enrichment of Thought-process, Making oneself understood, Getting to the essence, and exploring disagreements & amendments needed.
5.2.2.2. Basic Mathematics; The word Mathematics comes from a family of Greek words denoting to search or learn for meaning, & is a process of learning skills & abilities of mental processing & calculations, to apply them in variety of context, understanding & use of mathematical language, related to numbers, calculations & logic, formulae & equations.

Mathematics is the foundation of generating thinking and the base for Logic & Reasoning Skills. The practices to arrive at the solutions of Mathematical problems builds the mental processes to arrive at Logical solutions
5.2.2.3 Thinking, Logic & Reasoning skills: The purpose of Education, inter alia, is the development thinking skill. The need for making better & better judgments so as to think & reason more effectively, though, cannot be seen in isolation, is a life long necessity.

It may be conducive to focus & define Problems and to set Goals. The students should be encouraged to develop skills for Information gathering, to observe & formulate *inquisitively* questions ofEnquiry.The students should be encouraged to evaluate, establish and verify the problems.
5.2.2.4. Problem- solving Skills & Creativity developing skills and strategies, progress and tackling and reviewing solutions, response to the challenges a problem offers. Scientific Knowledge Base generation and extension of ideas and imagination - formulation of hypothesis. Preparedness is all the more a necessity.
5.2.2.5. Self- Discipline & Goals. Students as ever, will need self-discipline which entails respect & following Ethical codes & they should be able to set their own goals and ensure progress to achieve the same. Further, the Students must be able to work collaborated with different kinds of people. There must be continuous incentives, so that there is no dearth of spirit & energy any time.
5.2.2.6. Scientific Knowledge Base: The growth of the Civilization has been possible due the growths of Science &Engineering which have been influencing every thought process as also developments in all other areas.
Though, not that important, some skill in sketching do help in a better comprehension.
5.2.2.7. Computer Systems Development of On-hand skills of using Computer System, Ability to conceive information sources, inquiry, appreciation and decision-making, creative thinking, ability to review, modify and evaluate
5.2.2.8 Information & Data Processing: The literacy standards in Information & Data Processing are aligned

with the learning of the students, now practically, in all subject areas; the library, media, & programs may provide a vehicle to support & facilitate the learning process, and intellectual freedom. In Evaluation of information, the Students should be able to judge the value of what they read, hear, see; development of criteria for judgment of one's own as also others works and ideas

6. Curricula & Academic Contents

6.1. Curricula

6.1.1. This is yet another item which draws widely variant Advices from Teachers & Academicians. It is no wonder that the Courses get revised time and again and new books appear every year

6.1.2. It is the foundation that should receive topmost attention and with a good foundation, a superstructure can always be built.There should be continuous advancements in the contents, as the students reach higher & higher standards

6.1.3 For the development of the mental frame & imaginary world, it is necessary to have a chronological knowledge of the events of the history that would also help in consolidation of the ideas as to onesrole, as a citizen,

6.1.4. It is side by side important to have a fair knowledge as to the critical events chronologically of the history of the different States of the world.

6.1.5. Similarly, the knowledge of Geography is equally important. The word Geography is the products of two Greek words viz Geo and Grapho, meaning writings and descriptions of the Earth.

6.2. Academic Contents

Mathematics, Logic and Reasoning
Languages
Writing skill & Eloquence
Communicating effectively, including Elocution.
Scientific knowledge
Acquaintance with Nature & Sky
Geography
Indian & World History
Social Science including multicultural understanding.
Computer literacy.
Improving own learning and performance: evaluation of works

6.3.Culture & Behavior

Working with others**: development** of social skills, awareness and understanding and appreciation of others needs, views and modus operandi.
Efficacious Interpersonal Relationships
Understanding Honesty, Integrity and Social Values & Practicing these without any lapse.
Understanding the work ethics, need for individual contributions & self-discipline, and
Respect for the values & efforts.
An appreciation of of diversities between every individual.
Capability to work as team members with others
Respect for Teachers, & all others, as also for Authority
Commitment to family and community.
Eagerness to respectfully resolve the disagreements, even conflicts of interests.

6.4. Beyond the Classroom

This mainly aims at translating strategic priorities into training solutions by identification of the key learning needs,

It is necessary to formulate training goals, plan training strategies ,support performance improvement, so as to produce learning outcomes.

7. Computers Cyberspace and E -Learning

7.1. Prelude.

The Cyber education promise a change in the teachings of the Teachers and consequently, the learning of the students. While there be claims as to what Cyber education can do, it is necessary to have an appropriate evaluation of the findings –rather the benefits in tangible terms, the change is going to offer. This by itself is a difficult task as there will be change in the subjects and there is no ready means to compare the results. Apart from the Teacher's education, he should help in better acquisition of higher-order thinking and problem identification and solving skills

7.2. The Environment.

There has been a steady growth of the belief that the Children & Adolescents should be encouraged to develop expertise in Computer Systems, and to browse Internet that is the storehouse of Knowledge – a Library of Libraries. Computer Systems have also been increasingly, being inducted in Schools, even in Curricula, growing Computer literacy en masse, apart.

In the Residences of the well-to-do families and the IT Professionals, Computer is an essential complement, and it is a common scene to find the Children & Adolescents sitting before the Computer Systems, *adding to the visible pride of the Parents* - most of them with hardly, any concern as to what the Children actually, have been doing. A decade ago, say at the end of the last Century, there were around 180 million people using the Internet Globally — and most of them lived in the Developed World.

By early 2009, the number of Internet users *Worldwide* increased to over 1.5 billion, and more than 400 million of them, had access to Broadband.

With over 600 million users in Asia, 130 million in Latin America and the Caribbean, and 50 million in Africa, the Internet has been a continuously growing common Resource — vastly, side by side, increasing the threats of Cybercrime online, and consequently, Children while surfing, are also becoming more and more, vulnerable.

According to surveys in recent past, over 60 per cent of Children and Teenagers talk in Chat rooms, on a daily basis

Three in four children online, what is still worse, are willing –*rather* allured, to share *Personal Information about themselves and their family,* in exchange for expectedly, different kinds of Gifts and widely different kinds of Services.

And one in five children – *if not more*, are being targeted by a Predator or Pedophile each year, and *with ever increasing impetus*, the threats of multi-lineal complexities , actually, would be ever mounting.

"Protecting Children in Cyberspace" is an area that has been now generating serious concern amongst the intelligentsia, all over the World, in fact, over say, two decades. Children, *in fact, one & all*, it goes without saying must not be a prey to unscrupulous Predators in Cyberspace, of course, their own inquisitiveness & instinct.

The problems of different complexities start from the very first day, a Child sits before a Computer, and the indifferences of the Parents, School Teachers Computer suppliers et al,- *their own ignorance apart, have been the main reason for the Threats;* in large number cases where both the Parents leave for the Job, the Children enjoy full liberty to fiddle with the Computer the way they like, over hours & hours together.

7.3. The Threats

7.3.1. Computer Related Injuries (CRI)

It is now a well - established fact that regular users of Computers develop different kinds of ailments, - sometimes difficult - even irreversible, and more the intensity of involvement, higher is the degree of vulnerability.

A marked decline, reportedly, in physical fitness of North Americans, - Children included, where the uses of Computers are extensive, has already been noticed; *this may also be the situation elsewhere where the uses of Computers are widespread and intensive.*

The Indians, - ostensibly, due to lack of awareness, have been found to be affected younger ages, averaging around 27 years, whereas in the West, it ranges between 40 – 50 years. *On a Study on 650 subjects for one year, 60% Users, it was found, developed some symptoms of severe Injuries, and 70% with at least one Symptom.*

The users may suffer from *wide range of disorders affecting Muscles, Joints, Fingers, Hands, Wrists, Elbows, Arms, Shoulders, Knees, Eyes, Skins etc.; further, Toxic Emissions & EMF generated*, may also create health hazards. There have been cases when the users, - mainly due to *their ignorance & carelessness, have landed with immobility of permanent nature*.

What is more alarming, particularly for Children, that the symptoms which started initially with *occasional discomforts, - ignored otherwise, may cumulate in Injuries, even of permanent nature.*

The Threat to the regular users of Computers as to different kinds of ailments, - sometimes difficult - *even irreversible*, exacerbate with LAPTOP - *also known as Notebooks*, and more the intensity of involvement, higher is the degree of vulnerability.

The threat starts, basically from violations of Ergonomic Orders which are, by the very design, inherent in the Laptops and cannot be readily overcome.

With the rapid growth of Game-Playing Software, Computer-related Coursework and Online classes, requiring Students to spend longer hours in front of a Computer, Repetitive Stress Injuries (RSI), ostensibly, are inevitable. Most people, even otherwise, spend many hours of every day at their Computers, whether for Work, School, Emailing, Surfing the Internet, or even Gaming.

There are also, due to the *easy portability*, increasing numbers of Laptop users. Such Aches and Pains are often warning signs that significant injuries are just *one more mouse* click away.

In the Laptop Computer, Screen and Keyboard are connected as one unit, and proper Viewing and Keyboard-positioning are ergonomically, not readily possible. With the explosion in Computer usage, there has simultaneously, been a great increase in Computer-related injuries, *including (all the more?) children and teens.* The Laptops, being carried on the shoulder, also escalates strain on muscles & joints. The use of the *Laptop on the Lap*, even otherwise, is also considered harmful.

The very *Incorrect set up* aggravates the potential for developing *numerous painful and inconvenient injuries* those are, inter alia, referred to also by titles of Repetitive Stress Injuries (RSI), Cumulative Trauma Disorders (CTD), and Computer Vision Syndrome (CVS), *pinpointing the essentiality of correct postures for smooth working and hazard free health.*

Apart, long hours of sitting, as the studies reveal may make them fat & may not be conducive to mental & physical health.

7.3.2. Isolation

Isolation *that generates out of Occupation/Addiction with Computer*, from Family, School Colleagues, Nature, Physical Games, Recreational platforms, even Friends is yet another harmful feature.

The Isolation may come in the way *to Think better, Read better, Write better and of course, to Live better* - those made a man a Man, distinctly different, by leaps & bounds from Animals

7.3.3. Accuracy and Dependabilty of Information in Websites.

The Children & Adolescents always try to acquire new areas of knowledge, even try to verify their own knowledge and *any information that does not have Text value* **may result in long lasting damage**. The contents found on line may not always be sacrosanct, and the documents may get modified, even disappear.

7.3.4. Access to Proscribe Features.

In the process of surfing, they come to know about Proscribed Features which, apart from addiction, may create serious Mental Disturbances & Damage those may last lifelong.

7.3.5. Privacy & Its Danger

The Internet offers Children & Adolescents – in fact, one & all, practically, unlimited opportunity to explore new ideas, visit foreign lands, meet other Children & Adults alike, and participate in challenging games. But like the real World, the Virtual World may be harmful – in fact, all the more.Many Children are skilled navigators of the Web sites. They are comfortable in using Computers, fascinated by the Information and Images those can be explored at the click of a mouse The studies conducted at the recent times show that about 90% 0f the School going Children of Advanced Countries have ready access to Computers at School and/or Home.

The Perpetrators collect significant amount of Personal Information from Children & Adolescents by luring them to register with the Sites, join Kids Club, to enter Contests or fill out a Questionnaire; these sites compile Names, Addresses,favorite Activities et al, and Commercial Products. The Information is then used to create Customer Lists which are then sold to the Brokers who, in turn sell these to other Businesses, even Criminals.

Then there is Cyber bullying that can range from *Threats, Embarrassing and/or Cruel, harassments and Stalking to Posting Digital Derogatory Photos.*

According to a 2006 Survey of 1000 Kids by *Fight Crime: Invest in Kids, one sixth of all the Children between the age of 6 to 11, had the experience of mean, threatening or embarrassing things said about them on line*

Parents, Teachers and other Guardians cannot always be on hand to prevent Children & Adolescents, even youths from visiting Websites with Harmful & Objectionable contents, nor they can be always available to protect them or to discuss with them what they have been encountering in the Online World.

7.4. Computer & Education

There has been phenomenal growth in interleaving Education with Computer, and naturally, there is a need for Scientific and Psychological analysis as to the comparative superiority for thinking better, reading better, writing better and learning better.

Any Educational package, it must be very carefully borne in mind is as good as the Programmer and his in-depth knowledge, capability of understanding the interacting process, in the minutest details and questioning array, his communication skills, knowledge of programming and system et al, are essential prerequisites for a good lesson and the contents of the same lesson may differ widely from Programmer to Programmer as also the Teachers associated. Consequently, there may incompatibility between Systems, leading to confusions amongst Students and Teachers, no less.

What is most important is to strike a balance, and to redefine the roles.

7.5. Save the Progeny.

7.5.1.The Computer Systems must be ergonomically conducive, and there should a clear cut understanding as to the Duration of Uses, Breaks, & Adequate Time for *People around, Nature,& Physical Games, and Non-Computer Recreations must liberally available.*

7.5.2. While the efforts in some Countries to strengthen *Criminal Justice Laws* to ensure that everything is done to protect Children and to punish Cyber Predators, there is no substitute for Parental and Teachers involvements in Children's use of Computer & exploration of Cyberspace.

7.5.3 Family rules which basically, should be common for all, for Online Computer uses should be affectionately set as also awareness what Children should/can do online and Parental involvements are crucial. Parents must be value-conscious, educated, empowered and engaged to ensure impressive & valuable experience for their Children, while enforcing Safety online habits in the process. The Children, it must be impressed upon them, must not give out identifying Information such as Family, Home Address, School name, Pass words or Phone number, during Chat and visiting the Websites. They must not respond to any questionable message / email and while visiting Websites, as also those are threatening. Further, they should not even reveal such Data in private, unless they are known and otherwise reliable. They should not send any personal or family photo.

They must not fall prey to fictitious funds transfer, lottery or allurements of these kinds.

The Computer should be installed in a family room, rather than the Childs bedroom.

7.5.4. With the e-learning, both Teachers and Students will be Technology Dependent, and primarily, have to be fully conversant with a Layout and Operational steps of a System and associated Software; in the case of a networked system, Bandwidth should be commensurate.

7.5.5. *Interpersonal relationships beyond e-learning, are essential for Team building, Development of Communication Skills and of course, Social Behavior*

7.5.6. With the e-learning, both Teachers and Students will be Technology Dependent and primarily, have to be fully conversant with a Layout and Operational steps of a System and associated Software; in the case of a networked system, Bandwidth should be commensurate.

It is necessary to develop visionary models so as to interface it with the prevailing structure.

8. Role of Schools

8.1.'There won't be any Schools in the future…I think Computers will blow up the school. That the school defined as something where there are classes, teachers running exams, people structured in groups by age, following a curriculum - all that..'. Seymour Paper, 1984.

8.2.The day Parenting will be done by Software & Robots, Schools of course, will not be needed. In every iota of education, right from mother's womb, there is a Touch that cannot be readily defined and can be understood, best by Touch only which had a big role in making a man a Man .

8.3.The Schools which are the Temples/ Monastery/Church/Mosque/Gurudwara/other Religious centres of Education/ will definitely, be needed juxtaposed/interfaced withsome different media -- Software, Curriculum, Standards, Grading --- what is all the more important is Social Behavior, the Art &Culture of Coexistence-sharing compassion, love et al, essence of Humane Society and of course, Conceptual & Structural Knowledge.

8.4. It will be efficacious to develop a Value based Strong administration with clear cut rules & regulations, orderly & rigid atmosphere, and side by side a pleasant, proud worthy & illuminating environment.

It is relevant to review what the Schools have been doing to prepare, and impart Education, as also how to strengthen their roles.

- Identify and respect widely different abilities of the Students, by promoting Active as also Passive learning
- Allot more time & measures for professional developments of the teachers & Administrators.
- Developments of Standards those will enjoy respect all over, by redefining the Basics and clarify what is expected of Students for their own benefits

9. Teachers- their upbringing competence & excellence

9.1. The Teachers as basic necessity should possess adequate knowledge & qualifications in the subjects they are going to teach

9.1.1. They should possess lucid communication skills to make the tasks of learning for the students easy & not strenuous.

9.1.2. They should succeed in generating interests in the students and encourage them to ask questions and interactive.

9.13. Patience & logical advancements, inter alia, are yet two requirements for a teacher

9.2Due to fast advancements of Science & Technology, the Scenario around also go on changing and the teachers for the very respect & confidence enjoyed by them, have to be watchful and continuously upgrade them
Every individual- a Teacher or not, in the lifelong journey reacts as a teacher & are taught in every phase of life & living. Even a child tries to display the knowledge gained and this behavior is noticed even in infants.

9.2.1.There have been individuals who in their own performance as a student were just an average, but came out to a brilliant teacher,

9.2.2. The basic qualities which are relevant are attitude, sincerity, dedication and a sense of commitment.

9.2 3.Most teachers are left largely on their own whereas their needs, particularly with e-education should be duly appreciated and proper courses with on-hand expertise should be organized.

10. Norms for Accreditation

10.1 There is a question that comes up now & then whether text book answers with accuracy & methodology should be the basis for accreditation or some importance should also be given to the intellectual foundation & scientific base.

10.1 In the day to day living multiple intelligence eg. self-knowledge, sensitivity to ones own values, purpose, feelings, novelties, philosophy etc, may be relevant.
There are several instances where students failed to show any promise were found to make a mark in the world around.

10.2. The system of accreditation by interviews also may in some cases, fail to duly assess the potentiality. There are several instances where students failed to make any mark in interviews came out as outstanding later

10.2.1. It is however, important to outline the norms of accreditation so that the task is very clear to the evaluators and on the other hand there is no scope of any complaint of bias, favoritism, casual approach etc.

10.3. It is important to have respect towards the student's abilities, redefine the basis from time to time and clarify what is expected of the students.

11. Educational Reform

11.1. This is yet another issue which is often talked about, but such propaganda, simultaneously add to confusion, particularly in our country where there are wide differences in the structures of schools from place to place all the more, between Metropolises, Cities, Tons & Villages. These disparities to the extent possible may be brought down and Educational Cess being received, as a part of Income Tax, may be conducive to the purpose.

11.2 *Change* is only natural in espousing of evolution, and the higher *degrees of sagacity, consciousness, reasons & truth*, have to be duly respected, in action. There is, further, no scopeof ambiguous experimentation & escape route, based on unfounded clairvoyance & blue- sky thinking so that the transformation from passive to proactive shapeis smooth efficacious, and sustainable in the long run.

11.2.1. The issues which usually figure are

1) Longer school day or school year
2) After-school tutoring
3) Management of Schools
4) Smaller class sizes
5) Improved teacher quality by
i. Improved training
ii. Higher credential standards
iii. Higher pay to attract more qualified applicants
iv. Performance bonuses & merit pay
v. Removal of low-performing teachers
vii. Reduction in drop-out rate \
viii. Reduction in absenteeism
ix. English-only or. bilingual & trilingual education
6) Mainstreaming special education students
7) Content of curriculum standards and textbooks
8) Funding, neglected infrastructure, and adequacy of educational supplies

11.3. Educational reform have been occurring on a local level at various points throughout history, The modern notion of education reform is tied with the spread of Compulsory education. Education reforms became widespread after organized schooling was sufficiently systematized to be *reformed*.

11.4. In the modern World, Economic growth and the spread of Democratic philosophy have raised the value of education and increased the importance of ensuring that all children and adults have access to high quality and effective education that will make them competent to be a responsible citizen and to earn respectable livelihood

11.5. Modern education reforms are increasingly driven by a growing understanding of what works in education and how to go about successfully improving teaching and learning in schools. **But change for the sake of change should be avoided**.

12. Epilogue & Propounds

12.1. There have been visible paradigm shifts due to continuous changes in values, lives and expectations and there is a pressure to learn more more and more in lesser and lesser time; naturally, no change is good enough.

12.1.1 Whereas, there are wide disparities between the facilities available in the Teaching Institutions, as also the means of the Students, spread over the country; in fact, it is very difficult to find interfaces between the extremes at both ends on all relevant parameters..

12.1.3. Further, it may not at all advisable to attempt a rigid framework for Educational Methodologies, Systems, & Organization, nevertheless, there are certain basic norms - where there may be more of consensus, which are outlined below.

12.2. It is also assumed that for **formal education,** an Institution with a Campus, Teaching Staff and Accessories is a basic necessity. The theory of *go-as-you-like* has been visualized as a parallel & complementary mode of learning, for the very fundamental truth of human evolution.

12.3. There should clearly defined ***disciplines*** for *students, teachers and non- teaching* staff, mutually complementary to one another and any breach of discipline should be affectionately, democratically, and as the last recourse, sternly dealt with.

1) The *environment* should be *ecologically conducive*, with greeneries in & around, as far as possible. The campus should be duly protected and *any kind of political or antisocial activities* should be sternly dealt with; there should be no Mobile Phone Towers.
2) The *curricula* should be *clearly spelt* out without any scope of any ambiguity, harmonious progressively and *in full conformity with the Primary, Secondary* & *University Syllabi*.. The text books should be selected purely on merit.

12.4. Academic Structure

12.4.1. The Emphasis should be on *Mathematics, Logic & Reasoning Skills*, *Languages, Communication skills – functional & operational literacy, , History, Geography, Environment, basic Scientific knowledge, including Applied Science* & Sketching skills, and *where feasible Computer Literacy*.

12.4.1.1. If the conceptual foundation is strong, there would, normally no difficulty in building the superstructures later, according to the opportunities available and of course, personal ambition.
12.4.1.2.The lessons should be integrated and advanced stage by stage, so that the students are not burdened.
12.4.1.3. Computer literacy & e-learning should be treated separately.

12.4.2. Constitution & Government
12.4.3Interpersonal Communication Skills, including Speaking, Listening & Elocution & Presentations *ability to be a part of a team*.
12.2.4. The basic Conducts & Norms, adaptability of Interpersonal Relationships with the objectives of inter alia, mutual affection, bondage, &camaraderie and of course responsible Citizenships.
12.4.4.1. Where parents – at least one of them, devote enough time with the children- rather, they mutually enjoy the company of each other, the process of learning becomes smooth & result oriented with long lasting results. There should be rich, inspiring, stable Home learning environment, & care so as to enrich home learning and home work, as also self-esteem. It is important that they talk about Values, including those the child has already built up and practice.
12.4.4.2. Parents should interact & cooperate with the Teachers, understand their viewpoints and take active interest in in the School work. They should conduct as Partners, Collaborators, Problem solvers, Supporters, even Advisers & Co-decision –makers, though the opinions of too many people may confuse the issue
12.2.4.3. Parents have a big role in building strong moral values and Ethical conducts. They have also a big role in development of the skills of logical Decision – making.
12.2.5. *A sense of Nationalism – a spirit much beyond the State boundaries & Local Culture.*

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