

EDUCATIONAL ASPECT OF VISION 2020



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आँखों में

कितनी आँखों में दबे हैं रंग
इसका पता नहीं
लेकिन बन रहा है मौसम बसंत का
यहीं कहीं घास के उगने का समय भी हो रहा है
लताएँ उठ रही हैं
सूखी लकड़ियों का सहारा लेकर और
जो गर्भ में है
वह अंधेरे से निकलने के लिए
अपने हाथ पोंव चला रहा है.

दूर किसी पानी में भीगकर
चिड़ियाँ झाड़ रही हैं अपने पंख
नए समय में उड़ने के लिए!

.शंकरानन्द की कविता (आलोचना 45)

'असल में शिक्षा ऐसी होनी चाहिए जो बच्चों को न आधुनिकता की
आँधी में धकेले न रुढ़िवादी परम्पराओं में, बल्कि उन्हें सही गलत,
अच्छा बुरा, न्याय अन्याय के बारे में सोचने व फैसले करने में सक्षम बनाये।'

.दीप्ति प्रिया मेहरोत्रा (बच्चों को क्या पाठ पढ़ाएं ?) तद्भव अक्टूबर 2012

Vision creativity is a challenging task as it aims to build future scenarios and link the present with the future. It is very true that without vision, cultures, communities and civilizations perish. The exercise of vision building can neither be done by only re-structuring the present realities nor by sheer dreaming. Vision, dreams and future expectations must merge into contemporary realities. Visions can be realized and transformed into realities by understanding, initiative, commitment and hard work and dreams can be transformed into realities if full trust is put in self, society and the nature. Envisioning is a part of an individual's planning activities as also that of a

nation. Nations, big or small, developed or developing, all conceive and construct future visions and prepare strategies to achieve them.

Vision is not to be seen either as a long term planning exercise or as a road map. In both these cases there is something given, something existing which forms the base. On the other hand future aspiration generates vision and that stirs us to action. Through the eye of creative imagination the vision builder places ought in the context of is and develops a constructive picture about the present. Unlike activities involved in annual planning wherein the present shapes the future, the activities in vision building are guided by the future to shape the present. Thus the construction of vision is a type of dreaming rooted in the contemporary contextual social realities. With respect to education, this exercise is being attempted here under three sections, the first relates to Knowledge society which for, our purpose means a society where caring, sharing and using of knowledge are key factors promoting prosperity and well being of the people, the second section relates to knowledge as seen from the institution perspective and the third presents vision statement themes and strategies to achieve them.

In the last decade India has seen a revolution in knowledge and information sectors. It has gained a special position in the comity of information communication technology oriented nations. It would thus be advisable to give some space here to the term “knowledge society”.

The term ‘Knowledge society’, ‘Information Society’ and ‘Learning Society’ have now become familiar expressions in the educational parlance communicating emerging global trends with far-reaching implications for growth and development of any society. These are not to be seen as mere cliché or fads but words that are pregnant with unimaginable potentialities. Information revolution, information technologies and knowledge industries, constitute important dimensions of an information society and contribute effectively to the growth of a knowledge society.

The term “Knowledge Industry” was coined by Princeton Economist Fritz Machlup in his Book, ‘Production and distribution of Knowledge’ in 1962. The term ‘knowledge society’ has been used by Peter F. Drucker (1971) in his book ‘The Age of Discontinuity’. The term ‘Learning Society’ was used by Torsten Husen in 1974 and Hutchins (1970), the genesis of which lies in the concept of life long or continuous learning which was later on stressed in UNESCO reports of 1972 and 1996. The concept of global village has its genesis in the concept information society, “information revolution” and communication technologies. The world has shrunk into a small village due to the emergence of information and communication technologies. Alvin Toffler (1980) has advanced the idea that power at the dawn of civilization resided in the ‘muscle’. Power then got associated with money and in 20th century it shifted its focus to ‘mind’. Thus the shift from physical power to wealth power to mind power is an evolution in the shifting foundations of economy. This shift supports the observation of Francis Bacon who said ‘knowledge itself is power’, stressing the same point and upholding the supremacy of mind power, in his characteristic expression, Winston Churchill said, “the Empires of the future shall be empires of the mind”. Thus he corroborated Bacon and professed the emergence of the knowledge society.

INFORMATION AND KNOWLEDGE REVOLUTION

In the last fifty years information and knowledge revolution has become a reality. With the advent of satellites, televisions and computers, there is a great flow of information and knowledge. Boundaries between many disciplines are blurring. New disciplines have emerged. There are institutions which evaluate and undertake research on various aspects of knowledge

and information. Knowledge and information are imported and exported. There is a constant sharing of knowledge going among institutions and individuals. Institutions have become information and knowledge –oriented institutions. Even daily newspapers have become knowledge papers. With the advent of knowledge industry, the epistemology of knowledge has also undergone change. Theory of chaos, fuzzy logic and theories of probability have become important. New sciences like Neuro-Biology are emphasizing on mind-body symbiosis. Knowledge workers play a crucial part in the knowledge industry where knowledge is produced, transmitted and consumed. There is also networking of knowledge workers and of knowledge institutions. The management system of knowledge industry has to be closely re-looked into. Effective and efficient ways to manage knowledge workers are to be evolved. Obviously, the traditional, administrative and bureaucratic approach will not be adequate with respect to management of knowledge workers. Universities, colleges, schools, institutions of professional learning are all crying for a new management system that would be dynamic and responsive. There are places where knowledge is produced. Sufficient resources have to be made available to these centers. The processes and procedures which govern knowledge institutions are to be made more innovative, creative, flexible and responsive. Faculty members of world-class competence have to be nurtured and recruited, retrained and retained to ensure maintenance of levels, standards and dynamism. A constant research and review activity has to go into the various aspects of knowledge projects. Responsive and effective distribution systems are an essential pre-requisite in a knowledge industry. These often are weak. Within the knowledge distribution systems there are leaks. There are information rich and information poor societies and there is a skewed distribution of knowledge. Yet an average person today has more knowledge than his counterpart had a hundred years ago. An average patient today has more medical knowledge, an average individual has more legal knowledge and an employee has more managerial knowledge than his counterpart had say 50 years ago. Thus in the knowledge revolution, knowledge has not remained the monopoly of a few. And yet the distribution system has gaps and leaks and presents a skewed picture. Knowledge or information revolutions have become a reality because of some outstanding breakthroughs in the human history. Some of them occurred when:

Alphabets were created

Paper was invented

Zero was discovered

Decimal system was invented

Printing press was invented

Telegraph and radio were invented

Telephone, television, fax machines and Xerox were invented

Computers and internet were invented and

Satellites were put into orbit and telecommunication became a common experience.

These breakthroughs have resulted into the present information and knowledge revolution. Fruits of knowledge revolution are available but there is mal-distribution. This has contributed to development of islands of prosperity and continents of ignorance, poverty, illiteracy, over-

population, backwardness and poor health. If knowledge industry and knowledge society is to develop properly, then information has to be structured in such a way that it fulfils some basic conditions of inter-activity, mobility, convertibility, connectivity, ubiquity and globalization, as given by Toffler (1990).

Distances have shrunk in time and inter-activity is instantaneous. Inter-activity results when the sender and the receiver both interact and when electronic messages of one medium interact with messages of another medium. Video conferencing is one such example.

Another feature of the knowledge society is mobility in the information technologies. Mobile phones and lap top computers are examples which have made mobility a positive attribute of communication revolution. Another feature of information revolution is convertibility. With appropriate machines, messages of one medium can be transferred on to another for example films can be transferred on to video. Connectivity is another important feature of information revolution where different devices are connected with one another. Multimedia is an example of connectivity where audio, video, text and graphics are combined to produce information. Now the computers can be connected with audio and video by attaching audio CD or video CD players to them. Presentation of computers can be displayed on screen, thus connecting it with the functions of OHP. Ubiquity means the way in which various messages are made available everywhere to different economical layers of the society. During the Iraq war the messages were available in metropolitan cities, state capitals and district headquarters and even in small villages where antenna discs were available. The future of economy, stability and development of any country would depend upon how wisely it masters information and knowledge technologies.

The first important fact is to ensure that knowledge does not remain a prerogative of a few but is accessed by a large number of persons. The second important thing is to create facilities for accessing knowledge. The third important thing is to set up national and international knowledge corporations which will use knowledge both as raw material as well as the product. Knowledge networks need also to be built between the main land and Indian diaspora. With knowledge industry internal threats and external intervention will increase. The main question is how rationale, intellectual, emotional, aesthetic and spiritual knowledge can increase our happiness, harmony, peace, justice and a sense of proportion.

In a knowledge society, one has to guard against cultural colonization. Globalization will have a direct impact on culture. One has to make distinction between knowledge society and consuming society. Consuming society will have different keynote and ideological images and may lead to cut throat competition.

A system's approach should be followed in a knowledge society with respect to hardware, software, maintenance and management. Each situation should be examined on the basis of its inherent Strength, Weakness, Opportunities and Threat (SWOT). The critical points that need attention are the management of knowledge workers and knowledge institutions.

The economic, social, cultural, technological changes in the national and international scene contribute to the knowledge society. The present rate of economic growth can be substantially increased if India becomes super power in knowledge sector and if information and technology revolutions are properly understood and exploited. India can substantially eliminate poverty, generate wealth and can play a meaningful role in the international world order. Thus, keeping in view the emergence of knowledge society we briefly present below, the existing educational scenario.

EDUCATION AS AN ENGINE OF DEVELOPMENT:

Education is an important input both for the growth of the society as well as for the individual. Properly planned educational input can contribute to increase in the national gross products, cultural richness, build positive attitude towards technology, increase efficiency and effectiveness of the governance. Education opens new horizons for an individual, provides new aspirations and develops new values. It strengthens competencies and develops commitment. Education generates in an individual a critical outlook on social and political realities and sharpens the ability to self-examination, self-monitoring and self-criticism.

During the last five decades we have gained valuable experiences in all spheres and stages of education in the country. The expectations from education perceived by learners, communities and people are being understood better. The potentialities for future growth are also before us. The expectations and the chance of their being achieved are separated by a wide gap of resource crunch, credibility of institutions, levels of commitment, efficacy of functioning and several others. Any vision of education 2020 would have to take these into consideration. The success of the 'vision' would depend upon the extent to which it would be realized in actual practice. Essentially one could visualize dreams which would be converted into reality through diligence, commitment and comprehensive action oriented strategies.

Contrary to the expectations from education at the time of independence, gaps in education in the context of have and have-nots are increasing. The thin line separating privatization and commercialization is getting blurred. Merit alone no longer remains the criteria for moving upwards in education. There is a visible loss of credibility of existing systems of imparting education in schools and also in institutions of higher learning. On one hand we are short of basic infrastructures and on the other, optimum utilization of existing infrastructures has not been ensured.

Mere appreciation of creating a knowledge society and knowledgeable people is not sufficient. The message must reach each individual that these are times when every nation needs to move towards a learning society and knowledge society. People in India are better equipped to understand and appreciate it. They are familiar with traditional systems of creating, generating, transferring knowledge and the in-built respect in the society for the learned and the knowledgeable. These could become the cornerstones in moving ahead in building Vision 2020.

Specific approach should be necessary to ensure extended outreach of scientific and technological literacy to every category of people. It would become an essential component of school education on one hand and that of the adult education initiatives on the other. The curricula have to be regularly reviewed and revised. Obsolescent must be discarded and new areas introduced without delay. Lack of attention to this aspect has resulted in avoidable curriculum load on young learners.

Education system of the country is already being influenced by international trends and scenarios. During the last couple of years, provisions for admission to NRIs in various professional and academic courses have been made. A large number of foreign universities are opening avenues to young persons in India to get their degrees without leaving the country. There are trends to liberalize university systems which would permit more and more private universities. However, the impact on university education could become more evident in a couple of years. The nature of programs to be offered by universities and institutions will continuously undergo drastic changes and transformation. Acquisition of mastery level skills and competencies would be the demand. Degrees may not retain their importance in relation to jobs.

Greater attention would be paid to understand and analyze learner interests, learning needs and learning choices. Specific learning needs shall have to be responded to at each stage of education at secondary and university levels. Cafeteria approach in the choice and selection of areas to be studied will become a common practice. Evaluation systems of the present will be discarded. Focus would shift more to accreditation and certification. These will have to be made available at the choice and convenience of the learner. Towards this, an active interface of the formal education system with open learning and distance education shall have to be concretized. The Constitutional amendments leading to Panchayat Raj Act is one of the critical decisions which will have impact on the entire educational process in terms of its system, management, content, utility and credibility. It would ensure community accountability and responsibility coupled with necessary power and authority.

Education of the children will have to be examined in their specific contexts. The learning needs of the children in slums, in rural areas and in urban area would have to be met with strategies that would be appropriate to the situation and as such would differ vastly and widely. Issues of equity, equality would become very prominent. In a learning society none would tolerate being ignored or deprived of their right to a fair chance and equality of opportunities. The competition shall have to be transparent and honest. Favouritism, nepotism, corruption and other such practices, having reached their nadir, shall be resisted vehemently and violently.

The content of education shall no longer be determined centrally. There would be greater pressures from various sectors to develop content, learning and materials that would meet their requirements and needs. Issues which are emerging fast as areas of concern like energy, environment, pollution, land degradation, drinking water, health and sanitation, drugs and drinking, HIV/AIDS, malnutrition, mental and physical stresses emerging out of life styles and others would have to find appropriate response in the process of learning and skill development.

Re-generation of Indian economy shall continue to be highly dependent on re-generation of rural economy. This in turn would depend on achievement of universal elementary education and simultaneously on the quality of elementary education being imparted. The acquisition of skills during the first eight years in school shall become very important and relevant when this aspect is considered suitably. While focus on vocational education at secondary stage would gain strength, skill development in the earlier years would no longer remain neglected.

At present India has achieved a literacy rate of 64% but still the gross number of illiterates is the largest in the world. India has the third largest scientific and technological manpower of the world but it has also a high drop-out rate, only 2 out of 10 students reach the 9th standards. India has institutions like Indian Institute of Technology, Indian Institute of Management and several schools that can be compared with the best of the institutions in the world. It also has institutions where required infrastructure facilities are awefully lacking. There is a great disparity of educational achievements between good public schools and government run institutions in rural and slum metropolitan areas.

There is a great pressure on educational system and it seems the existing system as such cannot bear the burden of pupils' pressure. There are examples of excellent dedicated teachers but there are many teachers who would rate poorly on competency, commitment and performance. Although Panchayat Raj Amendment Act provides decentralization and flexibility there are also entrenched trends of bureaucratization and centralization.

Changes in the society are coming thick and fast. The changes are explicit in the sectors of economy and technology. They call for new shape of schools, new learner profile, teacher

profile, and administrator's profile. More attention has to be given now to excellence, quality and efficiency so that peace and harmony in the society can be maintained. Acceptance and appreciation for diversity and pluralism is inevitable. The future agenda for education will be to empower individuals, assure high quality of life and pave way to learning society. The new system of education has to be rooted to culture and committed to progress. For taking India in the midst of knowledge Society and for ensuring India becoming knowledge super power we propose an Education Vision for 2020 but before that we will like to see how knowledge has been perceived in the Indian context.

KNOWLEDGE: THE INDIAN PERSPECTIVE

The term “knowledge Society” cannot be accurately translated into Indian language with its nuance intact and at the same time one cannot conceive of a society without knowledge. The emergence of any society has always been through knowledge. In the context of the term as used now a days, knowledge society (Venkatasubramanian, 2000) means “creating, sharing and using knowledge as the key factor in bringing about prosperity and well being of people.”

The Sanskrit word for knowledge is ‘*gyan*’. In day to day language we also use words like ‘education’ or ‘*taleem*’ or ‘*elm*’. Though these words differ with one another, there is a lot which is common amongst them. If one looks at the word ‘*gyan*’ one sees it has semantic relationship with ‘*shiksha*’ and ‘*video*’. ‘*Shiksha*’ as defined in *Upanishads* is basically related to language, its use, articulation, its pronunciation, stress intonation, modulation etc.

The acquisition of knowledge is explained on the basis of two theories, one presumes that knowledge exists outside the learner and the teacher has to teach and provide that knowledge. The other explanation is that, knowledge resides within the learner and the teacher has to remove the learner's ignorance so that the learner can see his own knowledge and acquire it by self efforts. Indian perspective supports and stresses the latter concept which represents constructivistic aspect of knowledge.

Various metaphors have been used in education to convey its essence. Education has been equated to activities undertaken by a gardener i.e. looking after and developing young saplings. It has also been equated with banking i.e. depositing knowledge in the mind of the learner. These metaphors communicate two different approaches of education. In the first case the potentiality of education resides within the learner and the teacher is seen only providing supportive help whereas in the second metaphor the student is seen as a blank slate and the teacher deposits knowledge. Now-a-days industry oriented terms is used in the context of education. The terms like “knowledge workers”, “knowledge producers”, “knowledge brokers”, etc. are in fashion. Other words that one hears are productivity, utility, profitability, salability, marketability, etc.

In ancient India there were other metaphors and similes used for knowledge. They put education at the transcendental level. Knowledge (*Gyan*) was considered as *Amrit*. In *Isa Upanishad* it has been said that through *Vidya*, one attains immortality. As Sri Aurobindo (1994) says ‘Reality has Unity’. “Consciousness about multiplicity is due to *Avidya*. The realization that “Unity” is the ultimate truth brings immortality.

Para Vidya included spiritual knowledge relating to their cosmic reality which is inexpressible, infinite and indestructible, beyond the life and death. In this context *Avidya* does not mean lack of knowledge *Avidya* is not ignorance; it means knowledge which relates to doing activities related to worldly subjects which does not lead to life immortal. Knowledge has been

considered as bliss that removes doubts, confusion and ignorance. The Gita (Chapter IV) uses three similes with reference to 'gyan', as a rapier (sword). The world needs peace, progress, social cohesion and spirit to live together. These are the basic requirements which Delors Commission (UNESCO 1996) identified as the pillars of education. If we shape education on the principles of ancient Indian school of thought we will be in a position to prepare our youth for learning to live together. The need for international understanding was never so imperative as it is today.

As Dr. Karan Singh (1996) in his thoughtful article observes, "knowledge is expanding but the wisdom languishing". There is a need to expose our young generation to ideas of universal love, tolerance and peace. "We have to work to remove orthodoxy and obsolescence orientations. There is a need to offer holistic education with multiple dimensions of human personality. There is a need that education should provide experiences which would reduce hatred, bigotry, fundamentalism fanaticism, greed and jealousy."

The Gita in a subtle way gives prominence to self-directed, self-generated, self-initiated learning. It says one should raise oneself with own efforts. One should realize one's goals and aims through one's own efforts. Metaphysically speaking it means realisation and actualisation of self is through self only. Educationally this means that the process of education has to be self-directed and self-generated. The sense of fulfillment by self efforts was the core of ancient education. The "Learning to Be" (UNESCO 1972) mentions that man is an unfinished being and can only fulfill himself through constant learning. If this is so, then education takes place at all ages of life, in all situations and in all circumstances of existence. Education must transcend its limits of institutions, programmes and methods. And this concept was presented in all ancient literature on education.

The concept "life long education" has been emphasized in the Delors Report (UNESCO 1996). It bases its faith in the concept of continuing education. It makes distinction between initial education and continuing education and finds the later in harmony with the needs of the learning society. The commission observes that in 21st century, learning throughout life will be essential for evolving requirements of labour market, for mastery of the changing time frames and gaining rhythm of individual existence. Delors report interprets continuing education and life long learning as key concepts and finds it most relevant in the era of rapid globalization. Major transformation in the nature of employment and advances in science and technology make life long learning and continuing education a core component of the educational process. At this stage we must be very clear that illiteracy of the developing countries is as big an obstacle as functional illiteracy of the developed world. Both hamper the genuine growth of a learning society. In Indian tradition there is an injunction that activities relating to teaching and learning should never be abandoned or postponed. In Traitriya Upanishad, it has been repeatedly said that self-learning should never be abandoned,

Open Learning and continuing education are two important concepts which have come in educational vocabulary in the last 30 years. This does not mean that the ancient Indian thinkers were unaware of these developments. Open learning continuing education which emphasize on lifelong learning has been a corner stone of Indian thinking. Ancient Indian thinking has never given hundred per cent credit to formal institutionalized learning. In one of the *slokas*, four sources of education have been identified through which learning takes place: It says "one fourth of the learning is done when the student is with the teacher, one fourth of learning by the learner's self-study and self-reflection. One fourth of the learning results by peer interaction and the last one fourth come out of time context". There are also other powerful expressions which

appear in Vedas, Upanishad and Puranas. One of the significant utterances of Atharva Veda is that the aim and goal of every man's life is self-growth and self-enrichment and the mechanism for this is continuing lifelong learning: In Indian thinking, education and learning is not an inert activity. It is dynamic and interactive. It depends upon thoughtful listening, quick grasp and wise application and thoughtful reflection: Formation of character development of values, inculcation of commitment is at the root of Indian thinking. Accumulation of knowledge and development of skills is only the first preliminary step. The flowering of education must be seen in modification of one's behavior, in developing an open mindset, and in cultivating the finer sense of discrimination. *Achar Pratham Dharma* means behavior is the first requirement. In the Indian context gyan (knowledge) is a spiritual activity. It is the aim and objective of all individuals to equip themselves with knowledge and attain Vivek and Vinay. Vivek is the discriminating wisdom:

Arrogance and pride have been considered as negative human dispositions. It will be appropriate to recall, A.N Whitehead who said "I plead for a little humility. The self confidence of the learned people is the cosmic tragedy of civilization". As opposed to narrowness, self-centeredness, greed, anger, worldly infatuation, true knowledge as explained in the Gita, inculcates truthfulness, fearlessness and an abiding faith in non-violence.

The word *Vidya* as explained by Prof. Misra (1998) is made up of the root word '*Vid*' which has four meanings and comes very close to the four pillars of learning Delors Commission (UNESCO 1996):-

| | | |
|-----|---|---------------------------------|
| Vid | = | To know (Cognitive aspect) |
| Vid | = | To acquire (psychomotor aspect) |
| Vid | = | To perceive (perceptual aspect) |
| Vid | = | To internationalise. |

Similarly, the other word *Shiksha* comes from the root *Sak* that denotes "potentiality". In that sense *Shiksha* means empowerment. *Shiksha* was considered as one of the six branches of Vedanga which stressed on pronunciation intonation, modulation, etc. The advantages of knowledge and the *gyan* have been elaborately discussed by Bhrataari:

It has also been observed that without diligence and practice, one will never attain *Vidya*. Further, *Vidya* gets destroyed or diluted if it is not practiced or revised from time to time what Bruner calls as "revisitations". The process of attaining *Vidya* through analysis, synthesis and reflection is based on sound pedagogical principles. Importance of questions and cross questions has been greatly recommended. Self actualization, a term used in modern psychology comes closer to *Aatma Darshan*. This point has been stressed by Goldstein (1940) and Maslow (1954, 1962)

In Indian perspective a school is not a school plant but an abode of *Vidya* (abode where one knows, think and become someone) it was called 'Ashram', the term that stresses the need of hard work, labour, both physical and intellectual. The aim of education is not to know things superficially. Sri Aurobindo (1994 p.248) says "Simply to know the eternal and to remain in pain, the struggle and inferiority of our present way of being, would be a poor and lame advantage". Thus, knowledge brings us the fullness of being 'brahmavid', "Being" is an existence in its fullness. Being itself is power, consciousness and delight. Thus, the emphasis was on "Being" (*Vid*) rather than on empowerment which is the trend today.

EDUCATIONAL VISION

Two of the finest statements of educational vision in India must be recalled while attempting to perceive Vision 2020 for education in the country. The first of these was made by Gandhiji in 1931 in London in the context of universalising education in India.

'India lives in its villages. It is there that our producers live, voters live, the poor and illiterate live. It is the villages that hold the key to the country's problems. So vision of future India can be greater than to rebuild its half a million villages. The irony is that in terms of the teaming millions inhabiting these villages our developments, our democracy, and our education have all become irrelevant. But once we decide to approach them in the right spirit they are bound to respond, and rise to end their suffering. It may be that in the first phase selected homogenous SC/ST and other backward villages may have to be taken up. In case whole villages do not come forward in the beginning, then mutual-aid teams may have to be formed. Naturally in the whole process of rebuilding villages education will have the most vital part to play, because it alone can prepare people's mind to receive new ideas, and accept new tools, new relationships, and new forms of organization'.

The second vision statement is contained in Article 45 of the Constitution of India: The state shall endeavour to provide within a period of ten years from the commencement of this Constitution, for free and compulsory education for all children until they complete the age of fourteen years. The framers of the Constitution, knowing fully well that literacy rates were only 17% at that stage, had the courage and conviction coupled with confidence and self-assurance that it would be possible to universalise education within the next ten years. In fact the mandate given in the Constitution is pregnant with 'dream' potentialities like equality of opportunity to all children in terms and participation and success. It also unfolds the possibilities for better quality of life, freedom from ignorance and obscurantism.

India after 1947 has most assuredly marched ahead as a free, democratic, secular republic. During these years education has always been considered as the engine of personal, social and economic growth. Over the years, at regular intervals, the nation has taken stock of growth and developments in education and planned activities for its future development accordingly. In 1947, 1953 and 1966 it has looked respectively at university education, at secondary education and education in its totality. The nation has made concrete formulations on educational policy in 1968, 1986 and 1992.

ELEMENTARY EDUCATION

Universalisation of Elementary Education has been given the highest priority since Independence of the country. In an attempt to fulfill this mandate several interventions and initiatives were undertaken in the past such as enrolment drives, community awareness campaigns and incentive schemes. They brought remarkable progress as is evident from the enclosed Table 1 giving state-wise number of schools and enrolment in primary and upper primary schools. The goal still remained to be fulfilled because in 1998-99 approximately 407 lakh children of the age-group 6 to below 11 years and 306 lakh children belonging to the age-group 11 to below 14 year were out of school (refer table 2). The Ninth Five Year Plan (Planning Commission, 1999) envisaged additional enrolment of lower primary stage during Ninth and Tenth Five Year Plans as 250 lakh and 300 lakh respectively. The progress achieved

so far is much below than the envisaged targets by the end of 2001-2002, i.e. end of Ninth Five Year Plan (Table 2) approximately 487 lakh and 386 lakh children of the age group 6 to below 11 and 11 to below 14 years respectively will likely to remain out of school. The progress of individual states is at variance. Especially the educationally backward states like Andhra Pradesh, Assam, Bihar, J&K, Madhya Pradesh, Orissa, Rajasthan, Uttar Pradesh and West Bengal have to put more efforts. The new thrust under Sarva Shiksha Abhiyan and empowering the Panchayati Raj Institutions for development of education at the grass root level are the vehicle to fulfill the goal of UEE. To fulfill the target by the end of 2007, special attention is to be paid to enroll the poor children, slum dwellers and working children. As per 1991 Census, the working children were 112.8 lakh and their number must have increased a substantially during last nine years. Besides the most important activity during this period is required to be effectively monitoring of the aforesaid interventions.

SECONDARY EDUCATION

Demand for secondary education depends upon the performance of upper primary stage, which in turn depends upon the performance of lower primary. During VIII and XI plan period, focused attention has been paid to improve lower primary followed by improving upper primary sub sectors under UEE commitment of the nation. The X Five Year plan will be facing the issue of increased demand for places in secondary schools. The state-wise position as on 1998-99 for number of schools and enrolment are given in Table 3. Estimation of demand for secondary stage of education is given in the annexure. Based on the above estimation, around 5000 to 6000 schools having secondary sections having IX and X classes are to be opened and around 50 to 60 thousand additional teachers are to be appointed annually during the Xth Five Year Plan. Apart from the quantitative dimension, the secondary education has to face the demand for quality of education in the rapidly changing economic and social contexts in different parts of the country.

VOCATIONALISATION OF SECONDARY EDUCATION

The Ninth Five Year Plan laid down the criterion of diversion of 25 percent students of 10+2 stage to vocational stream so that they become self-employed or wage-earner in the field of their choice. The scheme is to be properly strengthened by establishing various linkages, as envisaged in the IX Plan document.

NEED FOR HIGHER PRIORITY TO IMPROVE QUALITY AND RELEVANCE

Optimum utilisation of resources made available for secondary education depends upon the priority to quality as compared expansion. The post-independence scenario of secondary education indicates that the policies followed have not focused on the quality. There is an excessive dependence on the examination based outcome indicators. Examinations for certification do not indicate the changes in the quality of secondary education. The nation has no database on the school outcomes beyond lower primary stage. Even at the lower primary stage, only at one point of time (1989) we have achievement indicators comparable across states. Even to get feedback for curriculum revision, one needs indicators of processes and outcomes at given points of time. During the remaining term of IX Plan, serious efforts should be made to generate such data to obtain the perspective of the X Plan. The X Five Year Plan should provide for quality audit of schools in different states. Quality audit should focus on functional input factors, the education process itself and obtaining achievement levels based on standardised

achievement tests. At present, the All India Educational surveys carried out by NCERT contain some parameters related to quality. This has to be supplemented by National Level Studies on the utilisation of inputs and school outcomes. NPE (1986) and POA (1992) suggest establishment of National Testing Organization. This needs implementation. Further, special attention needs to be given for quality improvement of teaching in the mathematics, science and computer education as stressed in the IX Five Year Plan document to bring improvement in quality. There has been a wide spread decline in demand for higher education in basic sciences. In the long run this may adversely affect scientific advancement in the country. Partly low demand is due to the curriculum and teaching-learning processes carried out in secondary schools and partly it is due to the attraction towards professional courses. In order to attract and retain bright minds in the fields of basic sciences, identification of talents and its nurturing, attracting them to the careers in basic sciences and improvement of science teaching in schools should find place in the strategy.

VISION STATEMENT

Keeping in view the achievements and gaps of education and keeping in view the present mood of the country and the economic and technological upswing we would like to construct a vision statement based on the faith that India will become a developed country by 2020 and all activities be taken up in a mission mode. By 2010 India will have 100% elementary education for the age group 6-14. School curriculum will be so planned that it will promote peace, harmony, social cohesion and composite culture. Education will empower learners for self growth and higher quality of living. Distance and open learning will become an integral part of instruction at all levels. Virtual classroom and self learning (using networks and websites) will get strengthened. Education will protect and promote ancient wisdom and will be indigenous in nature. School and university education will have an open window to international achievements. Educational management systems will become more sensitive, open, transparent and learner friendly and will focus on to provide academic support to students. The overall vision of Education – 2020 is to create a learning and knowledge society.

THRUST AREAS

- With elementary education becoming universal, more efforts will be put to provide quality secondary education, parent education, vocational education and teacher education.
- Intensive efforts will be made to provide educational opportunities through distance education using information and communication technologies. Students evaluation will become more formative and flexible. Curriculum will have a provision to offer cafeteria approach.
- School curriculum will not unnecessary load students. At the same time it will have comparative international standard and promote critical and independent thinking.
- Pre-primary education and early childhood education will become an important element of school education supported through public funds. At present it is offered by non-governmental agencies only at few places. Government's efforts in this direction will also continue through Anganwadis and Integrated Child development Scheme (ICDS). By 2020 it will become a regular feature, available to all children.

- Adult education will be of comprehensive nature encompassing, functional, literary, post literacy programmes and lifelong continuing education.
- Universities will take greater interest in college education and support Staff Development Programmes through extension activities and Academic Staff Colleges. By 2020 each university will have Academic Staff Colleges which will undertake in-service education of college and university teachers on a regular and continuous basis. All educational resource institutions like National Council of Educational Research and Training, State Council of Educational Research and Training, National Institute of Educational Planning & Administration and District Institute of Education and Training will get electronically connected and so will the UGC with its Regional Offices.
- Teacher education programmes, both Pre and In-service, will undergo drastic changes to make them relevant and rigorous. In-service programmes will become more communication technology oriented and will use virtual classroom teaching practices and will utilize internet facilities.
- Educational management will become efficient, effective, sensitive, and responsive and performance oriented.
- Income generation projects will become a regular feature of all institutions. Preservation, protection and modification of indigenous knowledge and composite culture will become an important objective of education.

STRATEGIES

To achieve the above areas, the same strategies are suggested as illustration. When elementary education becomes universal and adult illiteracy gets liquidated, the education thrust will shift to the remaining two important educational issues, strengthening of secondary education and vocationalising education. These priorities were identified decades earlier but steps taken in achieving these aspirations have been partly inadequate and partly ad-hoc. These need to be reiterated and reinforced here. In such ventures, potential of communication technologies should be fully and optimally utilised.

NETWORKING SCHOOL-LEVEL RESOURCE INSTITUTIONS

This strategy is based on the assumptions that resources are always inadequate, and widely distributed, it is by their proper mobilization that they can put them together and make a critical mass. At present, there are resource institutions at national, state and district levels. National Council of Educational Research and Training, National Institute of Educational Planning and Administration and National Open School are resource institutions at the national level. State Council of Educational Research and Training, State Institute of Education and Central Institute of Educational Technology are institutions at the state level and District Institute of Education and Training at the district level. The first requirement is to build a network of these institutions and establish links amongst them. To take up a concrete example, electronic links between National Council of Educational Research and Training and all the State Council of Educational Research and Training should be established preferably by 2001. This will make National Council of Educational Research and Training and State Council of Educational Research and Training interact closely on various issues related to school curriculum, teacher training, research projects. In case the technological facilities are made available in National Council of Educational Research and Training to undertake 'one-way-video' and 'two-way-audio', many programmes can be speeded-up and streamlined. Similarly, even on experimental

scale one or two educationally backward states may be identified where State Council of Educational Research and Training could be electronically connected with all its District Institute of Education and Training. As an illustration, if State Council of Educational Research and Training Rajasthan located at Udaipur gets connected with all the 23 District Institute of Education and Training of the state, then it would be very easy to deliberate on programmes, prioritise the programmes, monitor them and provide timely feedback. If this is done, District Institute of Education and Training can get continuous and instant feedback from the State Council of Educational Research and Training. We propose that some of district level resource institutions be electronically linked to state level once and the state level resource institutions with national level institutions. This could be a concrete activity for the next 2 or 3 years.

BUILDING STRONG EDUCATIONAL INFORMATION MANAGEMENT SYSTEM

This action area is based on the assumption that in the existing situation most of the actions are taken on the basis of personal liking and disliking, personal preferences and on hunches. If decisions are made on the basis of information available they would be more objective. Thus developing a management information system is the first pre-requisite.

At present there are no Educational Management Information Systems (EMIS) in many institutions. The Educational Survey and Data Processing Unit of National Council of Educational Research and Training makes available school surveys in CD ROM hard copy. Survey of educational research that National Council of Educational Research undertakes in areas like teacher education, educational philosophy, distant education, education psychology, teaching methodology is another input for Educational Management Information Systems (EMIS). It is now proposed that a mechanism should be designed whereby institutional resources are made available on Internet and anyone who wants access to it is free to do so. The EMIS could be thought of in various fields, for example they may be EMIS on teacher training institutions, schools qualification of teaching etc. In the first step, teacher training institutions of the secondary level may be enlisted with specific details related to location, address, telephone number, etc. In the second step, various courses offered by these institutions could be made available. In the third step, institutions which have facilities for M.Phil.andPh.D work should also be enlisted. The point is that the strong EMIS should be built in areas like educational research, education publications, etc.

MAKING AVAILABLE PARENT EDUCATION PROGRAMMES ROUND THE CLOCK

This action area is based on the assumption that parents want to increase their awareness about various educational matters. If appropriate educational awareness programmes are telecast and made available to the general public especially parents, it will help them to become better productive members of the society.

A society cannot be considered a knowledge society unless the members of the society have facilities and opportunities for lifelong learning. With the coming up of educational channel, the nation should be in a position to offer educational programmes of various types through satellite and computer networks. This means there would be programmes for adults, parents, etc. these programmes should be telecast round the clock.

Change to digital economy will call for new steps such as need for high speed and large band width networks so as to ensure last mile connectivity. A lot of content centers will have to

be set up to accumulate, collect and preserve ancient knowledge. Efforts to preserve folk stories, folk proverbs, folk sayings, etc., will also be made. Attempts will also be made to put some items of curriculum on the Website. Thus, by 2005 E-books and E-magazines may be available in schools and universities. The role of teachers as facilitators would expand when facilities of Internet are made available in schools.

OFFERING SPECIAL PROGRAMMES FOR GIFTED AND TALENTED STUDENTS

It is known to everyone that the real treasure of a country is its youth and specially youth who are gifted and talented. Any country which does not nurture the giftedness and the talent of its youth can never dream of becoming a progressive and forward-looking society.

There are programmes which are in place that are geared to search and nurture national talent research but they are sketchy and inadequate. Central Government and the state governments have some plans to identify young talents, both in science and social science streams. There are also certain incentives for those who have been identified as talented but these are too inadequate and do not cover a great mass of students. It is, therefore, proposed that to celebrate “knowledge society” the nation must develop a comprehensive programme to identify, nurture and support the talent at block and district level. It should be the duty of the Panchayats as well as of the state governments to identify the talent and create special facilities for their growth and nurturance.

In every district there will be a strong provision for education of gifted students. To begin with, each district will have schools for the gifted in the area of academic subjects, music, dance and painting and sports. Curricular activities will be so structured that they promote student mobility.

SPECIAL PROGRAMMES FOR GIRLS EDUCATION

Providing girl’s education and ensuring their full enrolment should be the educational objective to be attained by 2020. At present, the dropout rate in class VIII is as high as 82% in Bihar 83% in Meghalaya and nearly 80% in Rajasthan. One must remember that if we educate a boy we educate a human being and if we educate a girl we educate several generations. Article 45 of the Constitution provides free and compulsory education both for boys and girls up to 14 years of age. Education for All (UNESCO 1990) highlights education for women claiming that it is impossible to have the educated people if there are no educated women. Amendment 73 and 74 of the Indian Constitution which give special power to Panchayati Raj envisages that a third of the seats in local governments, rural Panchayats and urban environments be reserved for women. However, present position is alarming. The percentage of girls in classes VI- VIII is approximately 25% in Rajasthan, 29% in Bihar, 34% in Madhya Pradesh and 31% in Uttar Pradesh½.

EDUCATION OF SCHEDULED CASTES, SCHEDULED TRIBES AND OTHER DISADVANTAGED GROUPS

For achieving cohesive and productive society special programmes have to be launched for the Scheduled Castes, Scheduled Tribes and other disadvantaged groups. This can be done by providing positive protective discrimination and also by integrating socio

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