INDIA

Dr. Janak Verma

Reader, D.E.G.S.N.,National

Council of Educational Research and Training

COUNTRY REPORT ON POLICIES AND MEASURES INCLUDING FUTURE PLANS FOR UTILIZATION OF ICT IN THE EDUCATION OF CHILDREN WITH DISABILITY

Introduction:

92 Governments and 25 international organizations met in Salamanca, Spain, from 7-10 June 1994 to further, the objectives of Education for All by considering the fundamental policy shifts required to promote the approach of inclusive education, namely *enabling schools to Serve All Children, particularly those with Special educational needs.*

Education of Children with Special needs cannot be achieved in isolation. It has to be an integral part of general education System.

A number of initiative have been undertaken for the children with disabilities both at the National and International level for the education & empowerment of children with disabilities.

At the National Level the Constitution of India (26 November, 1949) states clearly in the Preamble that *everyone has the right to equality of education and of opportunity.*

Article 45 of the Constitution lays down that free, compulsory and Universal Primary Education should be provided to all children up to 14 years of age.

In line with its responsibility to develop policy in accordance with the Constitution, *National Policy on Education* (NPE) 1986 and its *Programme of Action* (1992) stressed the need for integrating children with special needs in general education system.The objective is to integrate them with general communities at all levels as equal partners, to prepare them for normal growth an to enable them to face life with courage and confidence.

The Person with Disabilities Act for equal opportunities, Protection of Rights and Full participation, 1995 (PWD Act, 1995) affirmed the access to free education to every child with disability in an appropriate environment till s/he achieves the age of 18 years. In order to achieve

the target of education for all, Govt. of India sponsored a centrally sponsored scheme of **Integrated Education for Disabled Children** (IEDC) that purports to provide educational opportunities for children with disabilities in common schools, to facilitate their retention in the school system. The children with disabilities, who are placed in special schools initially for preparation would also be, integrated in common schools once they acquire the communication and daily living skills.

One of the major curricular concerns stated in **National Curricular Framework, NCERT, 2000** is providing education for a cohesive society, so that equality of opportunity and access to quality education to various groups including girls, children with special needs and children from disadvantaged groups is ensured (4-5pp).

Keeping all these directives in mind India is moving towards the objective of Education for All by shifting from the goal of integration to the goal of inclusion.

Ordinary schools now include children with different disabilities. Such children can be considered part of the normal range of variations found in a population. It is the obligation of the school to develop instruction that includes these children in the group and makes them equal participants in everyday schoolwork.

Every student is different and instruction must suit the needs of individuals. Teaching methods must be matched to the abilities & needs of each individual student. For this alternative goals and methods should be worked out that provide greater flexibility.

Information and Communication Technology (ICT) opens up great opportunities to improve the quality of life of children with disabilities.

Information and Communication Technology is being placed at the core area. This is more true for disabled children who for some reason or other have difficulty in following the standard curriculum through established mediums.

The technology enables disabled students to become more independent and contribute on a much more equal basis than ever before. This integration facilitates the acceptance of people with disabilities. Their colleagues and coworkers are first hand witnesses to their skills and potential.

ICT offers individuals the ability to compensate for physical or functional limitations, to access knowledge by adapting digital media to the nature of their disabilities, and to enhance their social and economic integration in communities by enlarging the scope of activities available to them. The actions being initiated by UNESCO are expected to contribute to improving the standard of living of over 600 million persons around the world; 2/3 of whom live in developing countries; who have a range of mental and physiological disabilities.

ICT may contribute not only to the development of cognitive learning but to the social interactions within the class, strengthening the group and making teamwork and shared responsibility for assignments a natural element of the school's activities.

It is believed that computerized teaching materials would encourage the teacher to try out alternative means of achieving the objectives of the instructions.

Printed teaching materials are developed for the average students. Special need children often need an adapted version if they are to have access to teaching materials that correspond to their needs. ICT provide new opportunities to develop products permitting many solutions for both physical access to the material and cognitive adaptation of the content.

What does ICT accessibility means:

ICT accessibility consists of building and distributing a hardware or software product whilst ensuring that its content and application are available to the broadest possible audience, irrespective of the fact of whether individuals are using assistive technology or not.

Developments in ICT have changed society as a whole. A host of new products and services have become part of our everyday lives. Though ICT has contributed towards greater independence of children with disabilities, only some of these developments have benefited them.

This has happened not due to the limitations of this technology, it is because the new systems and products have not been designed with the people with disabilities in mind. Therefore, they are often unsuitable for use by these people.

Although there is still a great deal to do in terms of making education accessible to disabled children, there is now increased awareness of the absolute right each student has to learn, and that each child has something to contribute. Hopefully one day the playing field for all children will truly level with the accessibility of ICT to children with disabilities.

Access to teaching materials in a school for all

Computer use in the schools is now in a process of transition. More and more information from both the public and private sectors is now accessible on the internet, and is thus also becoming accessible to children with disabilities who cannot read or process printed material. The printed material is available to VH children in Braille or in the form of talking books. Similarly, children with reading disabilities have the right to printed and other material in the forms that would allow them to take part in instruction on the same terms as other children.

There are many different ways to change the way an electronic device behaves to take account of the varying needs of users. The following describes strategies for addressing the needs of users with a wide variety of abilities and limitations:

If the user cannot see the device, make it say things so that they can use their ears, If the users cannot understand things that are said by the device, let them change the way it says it, If the user has difficulty hearing the device, let them change the way it sounds, If the user cannot hear the sounds from the device, show the sounds visually, If the user cannot be sure of pressing the right button, allow them to Confirm button presses, If the user cannot provide speech input, allow them to use buttons instead, If the user cannot reach or touch the device, let them give commands by speech, If the user wants to use their own customized type of input and output, let them use Remote Control, and If the user cannot use the standard language, let them change the language to the one they can understand.

Touch-pads are one product used primarily by children with disabilities, though they have the potential to become a powerful alternative to the keyboard for early reading and mathematics instruction. In co-operation with the other Nordic countries and Germany and Ireland, working on a touch-pad that may give blind students enhanced information through tactile images. Digitally stored mapping materials that are used to generate city maps are currently being used on a trial basis both to teach blind students how to read maps and as a personal aid for the ongoing acquisition of information on their surroundings.

CIET of NCERT has developed 113 audio programmes of different duration for educable children with mental retardation (mental age 5-8 years) and 25 Programmes "Hindi textbooks : read aloud for children with visual handicap" (Age group 12-14). The textbooks "Indradhanush" and "Gayda Kaumudi" prescribed for higher secondary Schools has been read out for benefit of the children with visual handicap.

CIET has also developed a number of video programmes to promote the education of children with disabilities. It includes awareness programme for teachers, teacher educators, Parents and Community and a number of programmes based on classroom teaching.

Policy with regard to ICT for the education of the disabled in India

NPE (1986) and its Programme of Action (1992) envisages use of Mass Media in Chapter 4 on "Education of the Handicapped." It stated under item No. 13, 4.13.1 that Radio and TV are being used in a limited way both for advocacy as well as educational purposes. The CIET, SIEs, NIHs and other organizations will develop a variety of programmes so that they can be regularly telecast/broadcast. It further stated that the CIET, SIETs and NIHs will also develop software

in non-telecast mode and make it available to DIETs, other training centres and NGOs working with disabled persons.

The policy has ensured that steps will be taken by NIVH, AYJNIHH, NIMH and the NCERT to ensure the availability of Braille slate, and taylor frame etc. to VH children. Similarly language training material for children with speech and hearing impairment would be made available in regional languages.

Acknowledging the potential of modern communication technology the National Policy on Education 1986 and its Programme of Action 1992 had spelt out the actions the need to be taken in this important area in Chapter 9 on "Media and Education Technology".

ELECTRONIC MEDIA
(a) Present Situation
(School Education)

19.2.1 In school education, the Central Institute of Educational Technology (CIET) and the six State Institutes of Educational Technology (SIET) in Uttar Pradesh, Bihar, Orissa, Gujarat, Maharashtra and Andhra Pradesh continue to define the production facility.

19.2.2 An important initiative has been the distribution of radio-cum-cassette players and colour TVs in primary schools under the Educational Technology Scheme.

(b) Primary Education and Teacher Training

19.2.4 Recognizing the need to provide necessary background and orientation to primary and upper primary school teachers, inputs in Educational Technology have been made an integral part of in-service as well as pre-service training for teaches in the DIETs. A senior lecturer and lecturer in Educational Technology are part of the prescribed staffing norm for each DIET. These faculty members also serve as nodal points to liaise with the nearest AIR Kendra besides acting as trainers. They help them in production of educational broadcasts. Teacher Training Institutes like DIET, CTE and IASE have been provided with VCRs and colour TVs and efforts are now being made to make available adequate number of software for their optimal utilization.

(c) Higher Education

19.2.5 In higher education the IGNOU has been provided a half hour slot on the national TV network early in the morning. The Country-wide Class Room Programme of the UGC is continuing with a two hour transmission daily between 1-2 p.m. and 4-5 p.m. The UGC has created 15 Educational Media Research Centres (EMRCs) and Audio Visual Research Centres (AVRCs); through these centres the UGC has been able to achieve a level of 80% for indigenously produced programmes.

Radio and TV transmissions have an important role to play in bringing the remote areas within the reach of good quality education.

19.3.4 In-service training of teachers would receive more importance through both T.V. and radio.

(d) Distance education

Distance education in the school sector also got a fillip with the National Open School, which was started in 1989, identifying new vocational areas and providing on-demand examination. It has been very beneficial for the education of children with disabilities because it provided a lot of flexibilities in examination system which is very much required for these children. It has taken up improvements in the content, process and quality of education, particularly environment education, science, mathematics and computer literacy.

Computers in Education

In school sector the use of computer has been initiated by Computer Literacy and Studies in Schools (CLASS) Project. Though the coverage was modest (2598 schools) the CLASS project had led to increasing awareness of computer literacy among students, teachers and parents. However, a close scrutiny of the implementation strategy and achievements of the project shows that the project has not met with the desired degree of success, mainly on account of some short comings in the implementation strategy. In the University sector the UGC is supporting the programme effectively

FUTURE PLAN

The key issues during the Tenth Plan would be a greater focus on improving access and reducing disparities by emphasizing the Common School System in which it is mandatory for schools in a particular area to take students from low-income families in the neighbourhood. The plan will also focus on revision of curricula with emphasis on vocationalisation and employment-oriented courses, expansion and diversification of the open learning system, reorganization of teacher training and greater use of new information and communication technologies, particularly computers. The key theme in the 10th plan would be imparting quality education at all stages of education and the pursuit of excellence.

During 10th plan, Information and Communication (ICT) will include the convergence of centrally sponsored schemes of computer Literacy & studies in Schools (CLASS) and Educational Technology (ET)- which seek to familiarize students with IT. Keeping in view the current demand for IT, a major thrust is to be given to this scheme. State Governments

would prepare Computer Education Plans (CEP) for literacy and education. The components of the merged scheme of ICT in Schools would include (a) funding support for CEPs; (b) strengthening reorientation of the staff of the State institute of Education and Training (SIETs); (C) Digitalization of SIETs' video and audio cassettes in partnerships with NGOs; and (d) web/internet-based education to be managed by the SIETs and (e) production of video and audio cassettes after assessing the demand. The convergence of centrally sponsored schemes will help in imparting science, mathematics and computer education as well as environment and value education in a more focused manner.