

PAKISTAN

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EDUCATIONAL SUPPORT FOR CHILDREN WITH DISABILITIES AND THE UTILIZATION OF ICT

Pakistan is committed to become ICT driven nation and envisages to ensure the accessibility of ICT related technology to all the citizen including children with disabilities.

Information and Communication in our context refers to the way information, experiences and news is exchanged between individuals and/or groups of people. For people with hearing, visual and speech impairment, the process of communication demands different manners. It can be used for speech training and many other skills development in children with mental retardation through relevant games and exercises. We believe that assistive devices, tools and technologies can help this communication process better.

Pakistan is actively engaged in the commitment of promoting and protecting the right and dignity of persons with disabilities since 1981. While taking many steps for the betterment of persons with disabilities we have successfully finalized the first ever National Policy for Persons with Disabilities, 2002. The policy was formalized after a lengthy consultative process involving the relevant Federal Government Ministries, such as Education, Health, Labour and Manpower, Housing and Works, Science and Technology, Planning and Development and their views were incorporated. Provincial Social Welfare Departments and Prominent NGOs were also consulted in finalizing this exercise. It was decided that use of computers for education and training of persons with disabilities will be promoted in Federal and Provincial Govt. Special Education Centres. Private Sector will be involved in this system along with the public sector. Options open for the general public in this fast expanding field will be made available to persons with Disabilities.

Moreover, recommendations prepared during the International Seminar and Regional Demonstration Workshop on Accessible ICT and PWDs held at Manila this year are being considered for the utilization of ICT to provide educational support for children with disabilities.

Technology is often presented as a solution to a whole range of social and educational problems. It provides rich learning environment in effective learning/teaching, note taking, writing

assistance, access to reference material, cognitive assistance, instructional purposes, evaluation of academic outcomes, and material modification. Children with Disabilities can experience the joy of playing and experience a feeling of solidarity at the computer since it offers a communicative form that can adapt stimuli to the child's need. ICT can go well beyond the current Text Book and class room model to help achieve a quality education system. ICT can increase tutor's time with students by reducing administration duties. For pupils with physical disabilities, visual impairment or pupils with communication difficulties the ICT can create possibilities for inclusion.

Using computers children with special needs can solve the complexity of mathematics, develop language, learn graphic skills, eye hand coordination, sitting behavior and concentration.

Information Communication Technology encompasses a range of technologies including the use of computers, microelectronic devices and communication technology. In educational context it would mean the ability to manipulate the information and communicate it to others (here we mean to our special children) through sophisticated tools and devices.

Due to the paucity of funds research and development in the field of ICT based assistive technology for providing educational support to the children with disabilities remained very limited in Pakistan. Nevertheless, Non-Government Organizations are striving hard in this area. Low cost hearing aids are being manufactured in a laboratory set by Deaf Education and Welfare Association, Karachi and Speech and Hearing Center, Mardan. Ear moulds are also fabricated in the laboratories set by these centers. Efforts are being made to assemble Speech Trainer in Speech and Hearing Centre, Mardan. Loop system has also been installed at Speech and Hearing Centre, Mardan. Audiologist at the Center with the help of other engineers in the field of assistive technology is planning to develop a program for the assessment of hearing loss, adjustment of hearing aid and speech therapy through computer.

Educational software related development in ICT has undergone to the extent that literacy of national language i.e. Urdu through the computer is possible. However Microsoft tools are being utilized to develop many programs for children with disabilities e.g. animation of sign language and adaptation of JAWS program. Computer literacy for visually impaired and hearing impaired children is being arranged by some non-government organizations. A computer laboratory with the assistance of Sight Savers International has been set up at National Library & Resource Center, Islamabad.

The prevailing situation regarding the provision and use of augmentative and alternative devices at government sector is very limited. Few electronic gadgets, e.g. sound indicator, speech synthesizer, and symbol charts are available at National Institute for the Handicapped, Islamabad. With the financial and technical support from some International Organizations like JICA, Sight

Savers International, Norwegian Association of the Blind and Partially Sighted, we have been able to provide some equipment including Braille production unit, CCTVs, computer with speech synthesizer etc. Some local philanthropists have donated computer to many centers. However, MAKATON System of communication development is being used at a non-government organization. Training of teachers for adopting this system of communication development is being arranged by NISE, Pakistan.

Like other countries ICT is in practice in the education of children with Disabilities. Although the most advanced technology is not available to the children with disabilities yet the computer is used for vocabulary development in language deficit children. Close Circuit T.Vs and magnified Text at computer is used for low vision children. Braille, embossed print and narrator are used for blind children. Computer for the children with mental retardation and allied behavior problems is being used to develop skills such as eye hand coordination and developing sitting behavior and concentration. Narrator and frequency adapter in the computer is useful for the children with hearing impairment. Training facilities in ICT for the children with Disabilities are provided by the public and private sector.

The computer literacy project started in Pakistan in 1985 with the objective to enable the Pakistani students (regular students) to face the challenges of the 21st century. First short term training course for regular school teachers was arranged through the advisory unit of UK. Then, the Pakistan Association for Computer Education in Schools was formed. Since 1985-90 PACES in collaboration with a leading bank had been running programs to spread computer literacy to the younger generation.

Unfortunately no special education teacher had an opportunity to be benefited from this project since it was a project of Ministry of Education. Nevertheless the training for special education teachers (in the centers where the computer Labs have been established) is arranged through either Pakistan Computer Bureau, Islamabad, (at the local level) or through a tutor arranged by the center incharge. Now, NISE, Pakistan is however, making efforts to arrange short term training courses in ICT for the teachers of special children.

Although the use of ICT in distance learning/teaching and course content providing is immensely very great since it is pupils' self-paced with minimal training, guided by a tutor with extensive support facilities and can support traditional classroom activities but formal distance education through ICT is not available directly for the children with disabilities. However, master level courses are presented in many fields including Special Education by Allama Iqbal Open University, Islamabad (the first Open University in Asia) , Nevertheless, Video Cassettes on Pakistani Sign Language, Braille System, CC TVs. Talking books, computer and other electronic gadgets are being utilized for the education of children with disabilities.

While concluding I would say that ICT is presumed to carry with it lot of educational facilities for the children with disabilities. The need is to increase the understanding and consciousness of the teachers and authorities to the matter, arrange training of the teachers for the utilization of ICT and the last but not least provision of facility by the public sector.