Connecting Schools: Global Challenges and Solutions

EDICT2010: Enabling Access to Education through ICT

Shifting Paradigms for Accessible and Assistive Solutions: Can India's Schools Leapfrog Current Solutions?

India Habitat Centre, New Delhi, India
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PRESENTATION OUTLINE

- ITU's role in promoting connected schools
- Connect a School, Connect a Community initiative
- Global Challenges to Connecting Schools for ITU Members
- Solutions for School Connectivity
- ITU's role in promoting accessible ICTs
- Challenges to Connecting Schools for Persons with Disabilities
- Connect a School, Connect a Community Toolkit Module on Using ICTs to Promote Education and Job Training for Persons with Disabilities

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ITU's Role in Promoting Connected Schools

- Connect a School, Connect a Community Initiative
- Development of a Toolkit of Best Practices and Policy Advice
- Repository of Training Materials for Connected Schools
- National Projects to develop National School Connectivity Plans

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CONNECT A SCHOOL, CONNECT A COMMUNITY

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Toolkit of Best Practices and Policy Advice | **Training Materials, Applications, Tools**

The Concept | How the Toolkit is Organized | How the Training Materials are Organized

The Concept

Connecting all primary, secondary and post-secondary schools to ICTs by 2015 was one of the targets set by world leaders at the World Summit on the Information Society (WSIS). *Connect a School, Connect a Community* is a public-private partnership launched by ITU to promote broadband Internet connectivity for schools in developing countries around the world. Why focus on schools? Because connected schools can serve as community ICT centres for disadvantaged and vulnerable groups, including women and girls.

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Secretary-General and President of Rwanda Pose with ITU Youth Forum

Secretary-General Ban Ki-moon (centre) and Paul Kagame (second from left of Mr. Ban), President of Rwanda, pose with participants of the International Telecommunication Union (ITU) Youth Forum.

Date: Mon, 2009-Oct-05

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Blog

- "Integrame" program connects more than 1800 people in Ancash region- Peru
- President of Chile sends to the congress regulation project on teleworking
- Ministry of ICT and Telefonica Telecom provide connectivity to homes in 143 localities of Colombia

Events

- Connect a School, Connect a Community Ministerial Roundtable
  2010-05-25 14:30
- Connect a School, Connect a Community Seminar
  2010-05-23 13:00
- Improving Rural Development through Telecentres: Key Success Factors
  2010-03-29 20:00

www.connectaschool.org

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Global Challenges to Connecting Schools for ITU Members

- Who pays for Broadband Internet Connectivity?
- Which schools get connected?
- Who pays for ICT equipment?
- How to leverage connected schools to serve the greater community?
- How to ensure sustainability?

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Solutions to School Connectivity

- Develop national school connectivity plans identifying timelines for connecting schools and connectivity funding options:
  - Require operators to connect schools in their 3G licenses
  - Provide spectrum for WiMax in exchange for connectivity for schools
  - Require operators to provide low cost tariffs to schools
  - Allocate spectrum for schools
  - Reserve fibre stands for public institutions
  - Fund school connectivity through universal service funds
- Leverage connected schools into community ICT centres serving the local community
- Ensure teacher training and maintenance

National Projects - Nicaragua

- Development of Model Schools
- National School Connectivity Plan

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ITU's Role in Promoting Accessible ICTs

- ITU and G3ict developed the e-Accessibility toolkit for Policy Makers
- ITU organizes awareness raising seminars and workshops
- ITU develops projects in developing countries to create Multi Purpose Community Telecentres (MCTs) equipped with assistive technologies
- ITU is developing text-to-speech applications in Mongolian
- ITU MCTs for persons with disabilities revealed that adult users often have had no education, are illiterate and have no job skills
  - Reason: often a belief that children with disabilities cannot be educated, that adults with disabilities cannot be trained with job skills
  - Result: vicious cycle of un-educated, illiterate adults with disabilities unable to become financially secure and independent
- Gave rise to the Connect a School, Connect a Community toolkit module on persons with disabilities

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UNESCO Education Data

- 90 per cent of children with disabilities in developing countries do not attend school
- 186 million children with disabilities worldwide have not completed their primary school education
- 97 per cent of persons with disabilities do not have basic reading and writing skills
- Literacy rate for adults with disabilities is as low as 3 per cent and, in some countries, as low as 1 per cent for women with disabilities

ILO Data

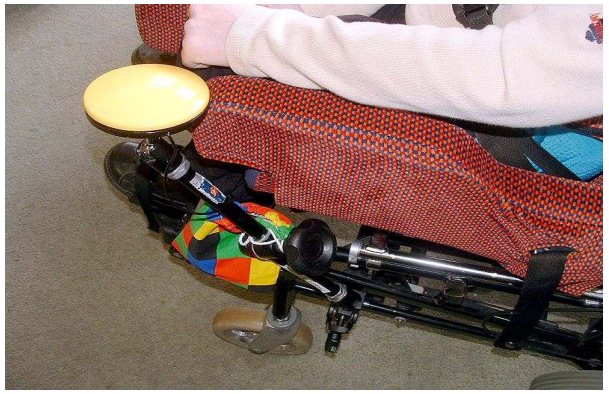
- ILO estimates that some 470 million people with disabilities are of working age worldwide
- However unemployment among the disabled is as high as 80 per cent in some countries

OUTLINE of Persons with Disabilities Module

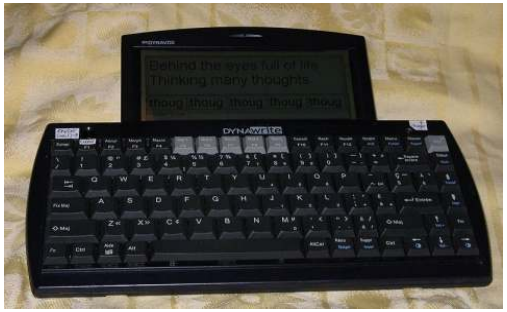
Section 1 – Introduction
Section 2 – Current situation, challenges and opportunities
Section 3 – Assistive Technologies (ATs)
Section 4 – Developing and Implementing accessible ICT connected schools
Section 5 – Accessible Multipurpose Community Telecentres in Schools
Section 6 – Checklist for policy makers
Section 7 – International texts on PwDs
Section 8 – Case studies
Section 9 – Resources for teachers and policy makers

Assistive Technologies: Not one size fits all

An arthritic hand trying to use a standard mouse



A single switch mounted on a wheelchair



Keyboard text-to-speech generating device

Speech generating device

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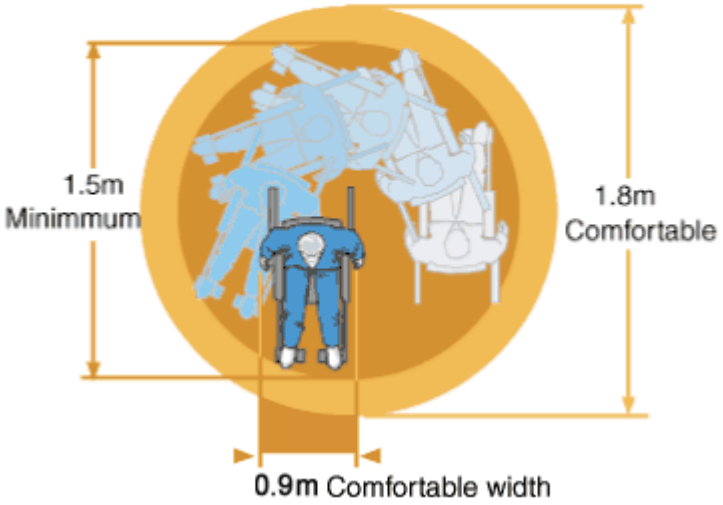
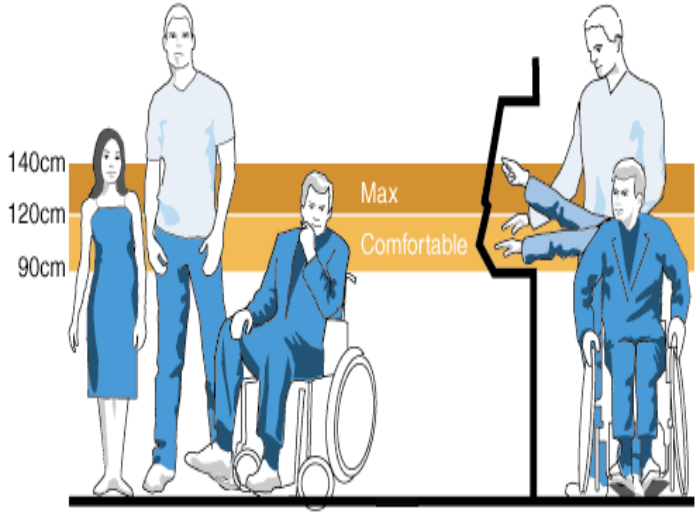
Accessible Buildings and Workstations



Wheelchair clearance and turning circle



Common reach zones

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General benefits of Assistive Technologies

- Enables greater learner autonomy
- Unlocks hidden potential for those with communication difficulties
- Enables students to demonstrate achievement in ways which might not be possible with traditional methods
- Enables tasks to be tailored to suit individual skills and abilities

Benefits for students

- Computers can improve independent access for students to education
- Students with special educational needs are able to accomplish tasks working at their own pace
- Visually impaired students using the internet can access information alongside their sighted peers
- Students with profound and multiple learning difficulties can communicate more easily
- Students using voice communication aids gain confidence and social credibility at school and in their communities
- Increased ICT confidence amongst students motivates them to use the internet at home for schoolwork and leisure interests.

Benefits for teachers and non-teaching staff

- Reduces isolation for teachers working in special educational needs by enabling them to communicate electronically with colleagues
- Supports reflection on professional practice via online communication
- Improved skills for staff and a greater understanding of access technology used by students
- Enhances professional development and the effectiveness of the use of ICT with students through collaboration with peers
- Materials already in electronic form (for example, from the internet) are more easily adapted into accessible resources such as large print or Braille.

Benefits for parents and carers

- Use of voice communication aids encourages parents and carers to have higher expectations of children's sociability and potential level of participation.

From: BECTA ICT Research (2003) *What the research says about ICT supporting special educational needs (SEN) and inclusion.* Available at http://research.becta.org.uk/upload-dir/downloads/page_documents/research/wtrs_motivation.pdf

Challenges to Connecting Schools for Persons with Disabilities

- How to ensure that ICT equipment is accessible for children with disabilities?
- How to ensure an inclusive education for children with disabilities?
- Cost of inclusive education
- Understanding users needs by type of disability
- Understanding how many children with disabilities receive an education – or don't
- Reasons for exclusion
- Breaking the cycle of un-educated, illiterate persons with disabilities
- Need for comprehensive policies

Reasons for Exclusion

- Attitudinal
- Physical access challenges
- No training of teachers
- No special transportation
- No policy strategy for addressing challenges

Cross-Cutting Policy Areas Supporting Accessible ICTs in Connected Schools

- Education
- Telecommunications
- E-government
- Finance and public procurement
- Import/customs duties and taxation
- Welfare and employment
- Equality

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Key policy areas for accessible ICTs in schools

- **Infrastructure** – including statistics on numbers of connected schools, computer availability and use and availability of assistive technologies
- **Support for teachers and students** – including from national agencies for ICT in education and access to specialist resource centers
- **Needs assessment of the person with a disability** – that cover the Assistive Technologies (AT) and related supports required to enable a child to receive an education in an inclusive schools environment
- **Training** – including on how to teach children with disabilities and on the use of accessible ICTs
- **Co-operation/research** –the development of a sustainable AT eco-system, including research into the needs and experiences of both learners and teachers and research into the development of new and better AT solutions and service delivery models.
- **Evaluation** – need to monitor implementation of the various policy reforms to evaluate if they provide the support required to achieve the stated goals and to inform further policy intervention.

Some Solutions to promote accessible ICTs in schools

- Develop National School Connectivity Plans to promote necessary Internet access and that include provision of accessible ICTs
- Regulators and policy makers ensure that accessible ICTs are available in the market and that customs duties and taxes remain low
- Educators Procure only Accessible ICTs – create demand for accessible ICTs
- Equip schools according to need of students
- Develop an AT ecosystem
- Fund Assistive Technologies through Universal Service Funds
- Teacher and Student Training
- Conduct stakeholder consultations
- Conduct monitoring and evaluation
- Development of affordable screen readers in local languages
- Use the Connect a School, Connect a Community toolkit to raise awareness and build capacity

Using schools for skills and job training for Adults with Disabilities

- Accessible ICTs hold the potential to enable persons with disabilities to receive job skills that would otherwise be inaccessible to them
- Sufficient and appropriate training enables persons with disabilities to reach their own personal potential
- Toolkit Case studies on job skills training, certification and employment opportunities

Project: Building Capacity for Harnessing ICTs for Disempowered / Marginalized Communities in Sri Lanka (eNABLE)

- ITU Assistance Phase 1 – technical assistance in IT equipment and assistive technologies to 28 centres.
- About 2,292 people including students, marginalized people and PwDs have been benefited

- ITU Assistance Phase 2 – technical assistance in IT equipment and assistive technologies to 33 schools, 2 universities, 17 vocational training centres, and 17 Ranaviru villages.
- About 4,678 people including students, marginalised people and PwDs have been benefited

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Thank You!

For more information:

See the Special Initiatives website at

www.itu.int/ITU-D/sis/

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