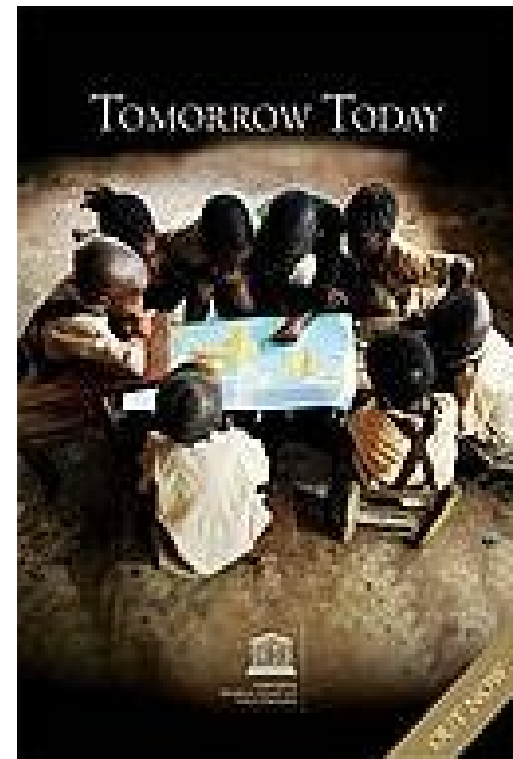# ICT Tools for Teaching & Learning

G Santhosh Kumar

Cochin University

Agenda

- What is ICT?

- Why integrate ICT in Education?

- What are the Challenges?

- What are the good resources?

Questions

"Despite the increasing use of ICT, the need for teachers is as great as ever"

"Placing ICT in schools will automatically improve the quality of education that children receive"

#"The Internet is unsafe for children to use because there is so much dangerous material available on it"

What is ICT?

- ICT is short for

  Information and Communication Technology

  and refers to a range of electronic tools for storing, displaying, and exchanging information and for communicating
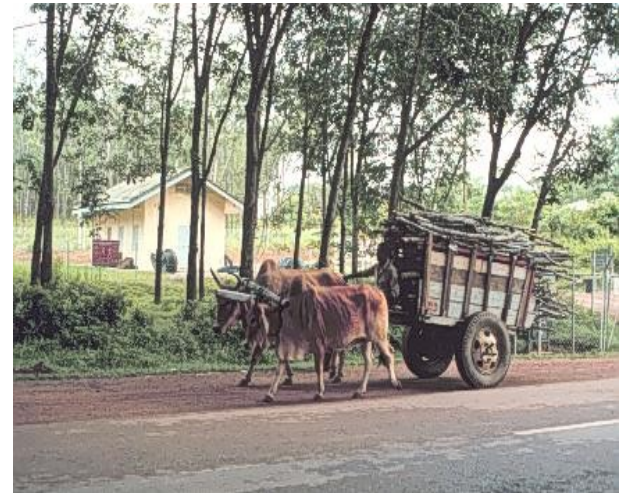
What do you think ICT includes?

Non-Computer Technologies Critical

- It is important to understand ICT refers to much more than simply computers and the Internet

- In many developing countries where computers and internet are limited to urban areas

- Use of other electronic devices and technologies is critical

- Digital Divide!

Why integrate ICT in education?

The Kurzweil–National Federation of the Blind Reader is a revolutionary device, a portable, hand-held camera that will read print and on-screen text to people living with

- ICT has changed the ways people live and work
- Ways people communicate each other
- Countries that are using ICT extensively have become **Knowledge Societies**
  - Societies that are reliant creating, sharing and using electronically communicated knowledge for their prosperity

Tools for education

- ICT tools make information exchange easier, faster and cheaper
- ICT tools offer potential to make education more accessible
- Improve quality of education
- Provide effective and efficient management tool

Accessible Education

- Improving access to information

- Enabling greater access to education

- Providing affordable anywhere, anytime learning

- Sustanining lifelong learning

Improved Quality of Education

- Improving students motivation
- Personalizing student learining
- Enhancing student learining
- Giving feedback and reinforcement
- Enhancing the quality of teaching
- Improving teacher education

Challenges

- Infrastructure
- Total cost
- Technical support
- Professional development

Where do we stand?

- The importance of using ICT for improving education has been emphasized in the policy framework for over a decade in India

Education indicators- India

Education parameter		Value
Adult literacy rate	Male	70.2
	Female	48.3
Youth literacy rate	Male	87
	Female	77
Gross enrollment ratio (%): Primary education	Male	114
	Female	109
Gross enrollment ratio (%): Secondary education	Male	59
	Female	49
Expenditure on education (% of GDP)		3.2

Source: www.unicef.org; www.cia.gov

Education indicators- India

ICT parameters	Value
Internet users (per 100)	6.9
Internet subscribers (per 100)	1.09
Broadband subscribers (per 100)	0.45
Mobile coverage (%)	61
Mobile subscribers (per 100)	20.8
Personal computers (per 100)	3.17
Internet affordability (US $/month)	6.6
Mobile affordability (US$/month)	2.5
Radio subscribers (per 1000)	107.3
Households with TV (%)	32

Source: www.itu.int; www.mdgs.un.org; World Development Indicators Database; ww

Initiatives by India

- ICT@School Scheme (2004)
  - In Kendriya & Navodaya Vidyalayas
- Sarva Shiksha Abhiyan
  - To ensure universalization of education by bridging the gender and social gaps by 2010
  - Chalta-Phirta Mobile Bus (NewDelhi)
  - Ekalavya Computer Aided Self Learning (Chhatishgarh) multimedia textbooks classes6-8
  - IETS (Bihar) Settingup computer labs

Chalta-phirta mobile school bus to start from January 25

Moushumi Das Gupta
New Delhi, January 8

THE NEW Year has brought in some good news for children from disadvantaged groups who cannot attend schools because of financial or other hardships.

The *"chalta-phirta"* mobile school bus service will start in the Capital from January 25 and it will take education to the doorstep of such children who either can't go to school or have dropped out because of various reasons.

The project will be implemented by the education department and will be the city's first mobile school bus service. Initially two buses will be pressed into service. The yellow buses will be fitted with a television screen

ILLUSTRATION: DURGA

aimed at providing elementary education to all children up to 14 years.

The education department is in the process of finalizing city based NGOs for

Initiatives by India

- EDUSAT
  - By ISRO Education Channel
  - VICTERS (Virtual Class Room Technology on Edusat) By Kerala IT@School
- IGNOU
- Kendriya Vidyalaya Sangathan
  - Hardwar, Content, Teacher training
  - Associated with Microsoft, Oracle, Intel etc.

Initiatives by India

- Sakshat Portal
- Gyan Dharsan/ Gyan Vani
- National Knowledge Network (2009)
- Center for Science, Development and Media Studies (CSDMS)
- Information and Library Network (INFLIBNET)
- Developing Library Network (DELNET)

Initiatives by India

- Education and Research Network (ERNET)
- National Program on Technology Enabled Learining (NPTEL)
- Multimedia Educational Resource for Learning and Online Teaching (MERLOT)
- Common Wealth of Learning (COL)
- One Laptop Per Child (OLPC) Bangalore
-

FOSS in Education

- National Resource Center for Free and Open Source Software (NRCFOSS)
- Kerala State IT Mission (KSITM)
  - GNU/Linux for School
  - School Wiki
- Society for Alternative Computing and Employment (SPACE)

ICT using Web Technologies

- Blogs
- Wiki
- Podcast
- Youtube
- Social Networking