India's National Mission on Education through ICT

ICCE 2012

Panel 3: Practice Driven Research, Teacher Professional Development and Policy of ICT in Education

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Education in India

- Problem – Large numbers
  - students, teacher training required, geographical spread

- Opportunities – Large numbers
  - content development, infrastructure development, teacher development programs, research

- There are many individual and institutional projects.

- Here we present a few examples from the largest unified national level effort – NMEICT.

National Mission on Education Through ICT (NMEICT)

- Policy: Government of India is committed to supporting education through effective use of ICT.

- 100+ projects, 20+ institutions, Rs 6000crore (~1 billion USD)

- All content under Open Education Resources
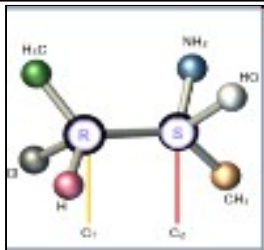
- Technology developed under FOSS
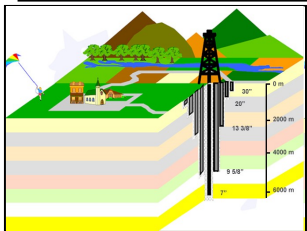
- www.sakshat.ac.in

NMEICT Projects
Content generation for higher education

NPTEL — National Programme on Technology Enhanced Learning

http://nptel.iitm.ac.in/

300 video & web courses (1000 more proposed), 40 hours each

Project OSCAR — Open Source Courseware Animations Repository

VL

http://oscar.iitb.ac.in
300 animations, simulations
Instructional Design workshops

http://www.vlab.co.in
Virtual Labs

NMEICT Projects

Computer tools literacy

www. spoken-tutorial.org

300+ tutorials

20 Indian Languages

www.fossee.in

500 workshops in Scilab, Python

NMEICT Projects

Teach 10000 Teachers

- 2-4 week long workshops
- Blended mode
- 15 workshops - each 1000 - 10000 teachers
- http://www.it.iitb.ac.in/nmeict/

NMEICT Projects

Technology Development

- Akash : the $35 tablet!

- A-View : Interactive e-learning software
http://aview.amrita.ac.in/

All specifications in Open Standards

Practice Driven Research

Educational Technology Research (PhD) in design, implementation and evaluation of NMEICT Projects

Sample PhD thesis titles:

- Design considerations for e-learning animation
- Development of guidelines to design and evaluate Virtual Labs
- Development and assessment of engineering design competencies
- Automation in constructing customized textbooks from lecture transcripts

Design

- Interactive Visualizations in Engineering Education
- A collaborative approach for programming efficacy using Spoken Tutorials
- A framework for scaffolding to teach programming to Hindi-medium learners

Implementation

- Customized evaluation framework for learning objects

Evaluation

Take-away

India has lot of:

- Govt support for this mission.
- Investment in teacher training
- Current work in development
- Ongoing research

Going ahead:

- Large scale implementation
- Evaluation from multiple perspectives

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Contact us:

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