Outdoctrination

Society, children, technology and self-organisation in education

PCF4 Keynote
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Remoteness and the quality of education
Schools in remote areas do not have good enough:

- Teachers
- Retention of teachers
- Infrastructure
- Maintenance of infrastructure
Remoteness and the quality of primary education

Total Performance vs. Distance from Delhi

Total Scores (%) vs. Distance from Delhi (km)

R² = 0.7091
Teacher's preferences

Preferences vs. Distance from Delhi

Would like to move to an urban centre

Semi-Rural

Would not like to move to an urban centre

Rural

Distance from Delhi (km)
Educational Technology

• Is traditionally piloted in affluent urban schools, this biases the results
• ET is perceived to be over-hyped and under-performing in schools that have good students and teachers
• ET should reach the underprivileged first and not the other way about
• Improvements at the bottom of the scale are proportionately higher than at the top
Alternative Primary Education

• Where schools don’t exist
• Where schools are not good enough
• Where teachers are not available
• Where teachers are not good enough
Minimally Invasive Education (MIE) is new educational technology for achieving mass computer literacy, and some basic primary education at a cost that is considerably lower than traditional alternatives. It employs learning models such as collaborative constructivism and a series of interlocking innovations, both technological and pedagogical. Computers are made available in shared, public spaces, free of charge and no structure is imposed on when, how or what children learn.
Process control based laboratory tutoring systems

The computer is in physical control of the equipment and is able to monitor what the children are doing.
Children and Values
Some examples of confusion

Sometimes it is necessary to tell lies
It is OK to like being alone
Sometimes it is OK to break a promise
Can technology alter the acquisition of values?
Self-organising systems
Natural systems that show self-organisation

- Galaxies
- Molecules
- Cells
- Organisms
- Societies
A self-organising system is one where the system structure appears without explicit intervention from outside the system.
Emergence

The appearance of a property not previously observed as a functional characteristic of the system.
Other examples of self-organising social systems

- Traffic jams
- The stock markets
- Society and disaster recovery
- Terrorism and insurgency
Examples of self-organised learning systems

- Slashdot
- Wiki
- Bearshare
- Hole in the wall
- Remoteness affects the quality of education

- Educational technology should be introduced into remote areas first

- Values are acquired, doctrine and dogma are imposed

- Learning is a self-organising system
An educational technology and pedagogy that is digital, automatic, fault-tolerant, minimally invasive, connected, and self-organised

To address remoteness, values and violence
Can it be a goal for educational technology in the future?