Technology in Education: learning lessons from the past

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- The computer will be as important as books and paper in the classroom of the 1990s – and far more important than overhead projectors and videos

Sunday Times, Oct 31, 1982

- £1bn was spent putting computers in schools to help pupils become brighter and better. So what has their impact been? Virtually nil.

Daily Mail, Jan 11, 2003

A brief (& partial) history of technology in schools….

What's been driving it?

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Boosting the technology industry

- 1980: Micros in Schools Project
  - 'Schools should be provided with small and low-cost microcomputers … to give a boost to our own hardware industry they should be asked to design and supply these quickly' (National Strategy for IT]
- 1998: National Grid for Learning
  - The [Grid] will of course also expand the market opportunities for all PC suppliers and we hope to get a fair share of this additional business' (Peter Stuart, Fujitsu)

Preparing tomorrow's workforce

- We must not forget that when we move on out of this recession we shall need trained young people ready to cope with the latest technology has to offer (Boyson, 1981)

- Today's school children are tomorrow's workforce … The skills for accessing information and sharing knowledge and best practice are needed in education and work – they are life-long skills (UK Net Year, 1998)

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Bringing schools ‘up to date’

- The [NGFL] will provide opportunity for schools to develop smart systems for dealing with information…. Should mean lean administration (Morris, 1998)

- Enabling schools to get wired up… represents the biggest ever investment in schools’ ICT… and goes some way towards fulfilling our promise of modernising the classroom (DfEE 1998)

Improving/ transforming learning

- Digital resources… will encourage pupils to stretch themselves with new ways of learning, giving pupils access to the latest information, great works of art and video clips of key thinkers and writers (Blunkett, 2001)

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Initiatives

- 1980s : DTI funded initiatives - microcomputers
  - Micros in Schools (50% cost of all computers)
  - Microelectronics in Education Programme £12m (info/ curriculum/ software)
  - Software In Schools & Modems in Schools £5m
- 1987 – 'New Technology for Better Schools' (DES)
  - £19m for hardware and training (still purchasing restrictions)
- 1988 – National Curriculum
  - IT as cross-curricular theme
- 1990s: DES/DfEE/DfES – internet/web
  - Superhighways for Education (pilots in practice nationally)
  - National Grid for Learning - £1.7bn for teaching training, hardware & software, digitisation of content, laptop and digital video initiatives

The Situation Today

- Over 99% internet connectivity in schools
- 1:9 (primary) and 1:6 (secondary) computer to child ratio
- Avg 31 (primary) and 155 (secondary) computers per school
- 76% (primary) 80% (secondary) teachers report confidence in using ICT

www.dfes.gov.uk

Usage:

KS3 English lessons – 60% never/hardly ever use ICT

KS3 Maths lessons – 67% never/hardly ever use ICT

KS3 Science lessons – 68% never/hardly ever use ICT

'Impact'

There is no consistent relationship between the average amount of ICT use reported for any subject at a given key stage and its apparent effectiveness in raising standards

ImpaCT 2 Report, 2002

Outside School

- 68% writing on a computer every week
- 69% playing computer games every week
- 54% looking up information each week

- Mobiles: 82% sending texts, 69% playing games, 12% browsing internet each week

InterActive Education Report, June 2001

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Lessons?

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Barriers to exploiting technology for learning in schools

- Overselling: Technology as ‘quick fix’ – without a coherent educational rationale
  - Confused drivers for use
  - Assessment
  - Pedagogy
  - Absence of ‘learning theory’ or learning contexts in design and development processes
  - Failure of educational research to develop coherent position (fragmentation of good practice)
  - Centralised approach in school provision – the ICT ‘label’ – and lack of technical support

Beyond ‘the quick fix’

- Educational objectives driving development

- Its not just about the technology…..
  - Interdisciplinary approaches/ working teams
  - Build knowledge/ share knowledge/ retain knowledge
  - Work at macro as well as micro levels; and with contexts of use as well as the individual
  - Design for the learners not the school system?

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