Introduction to and History of Learning Technology, and the Social, political, organisational perspectives

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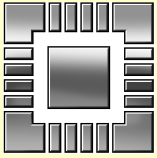www.ecs.soton.ac.uk/~hcd

What are Learning Technologies / eLearning?

- A learning technology is any technology that can be used to help someone learn;

- A learning technologist is a person who aids teachers to use the technology to create learning materials;

- eLearning has traditionally been used to refer to the use of the internet to facilitate *distance learning*

- Modern definitions of eLearning are more flexible and open e.g. HEFCE defines eLearning as "any learning that uses ICT".
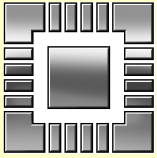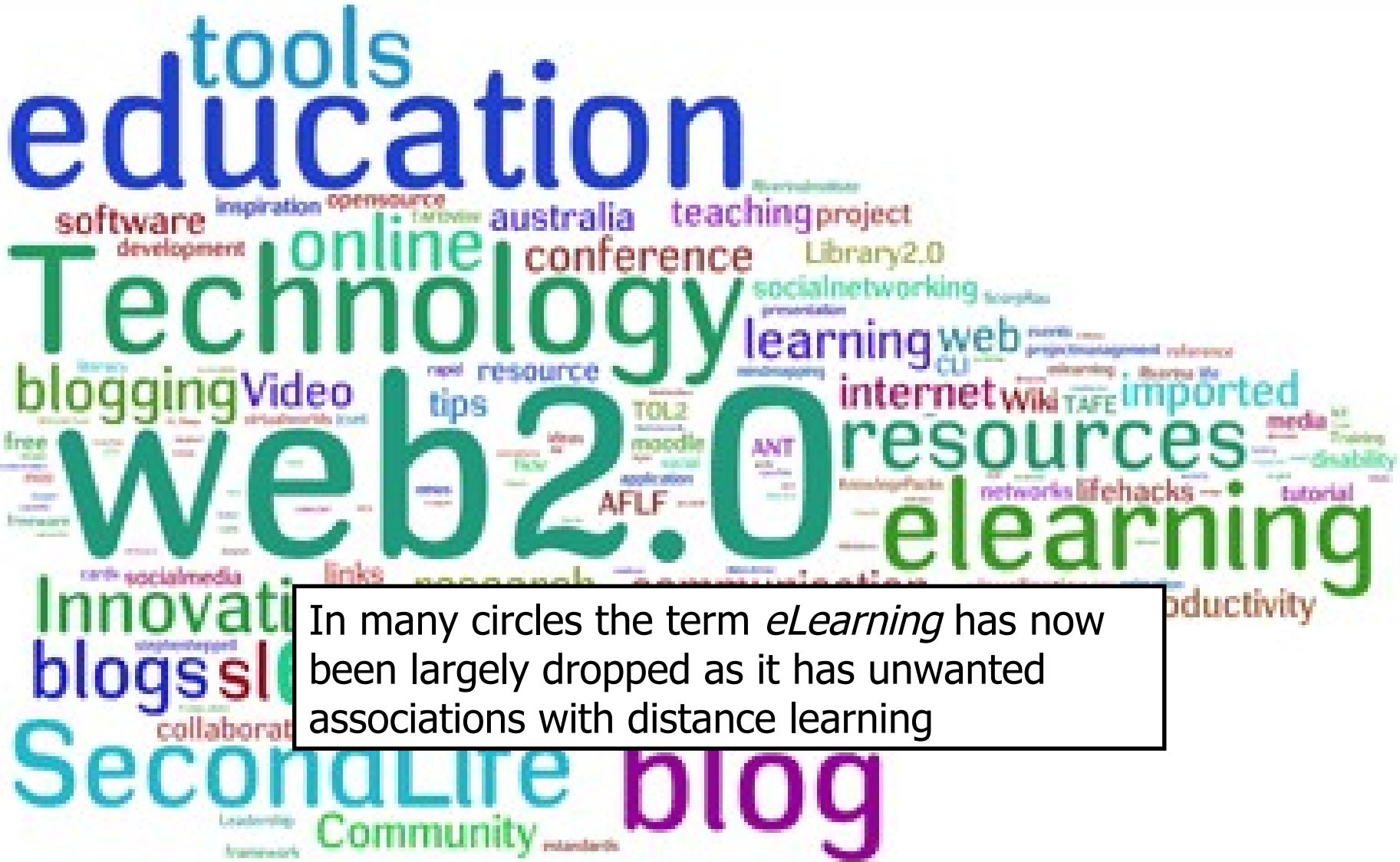
In many circles the term *eLearning* has now been largely dropped as it has unwanted associations with distance learning
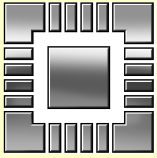
How are we going to study LTs in INFO3004?

- All information, timetables, updates and notes will be on the notes website https://secure.ecs.soton.ac.uk/notes/info3004/
- There are two lecturers responsible
  - Hugh Davis (hcd@ecs.soton.ac.uk, x23669). Level 3, Building 32
  - Lester Gilbert (lg3@ecs.soton/.ac.uk, x23831. Level 4, Building 53
- There will be 12 weeks of lectures
  - Hcd will cover motivations, tools, standards and interoperability
  - Lg will cover Design for Learning - there is a text provided
- There will be a coursework (deadline week 11).
- The assessment will be 50% be written examination and 50% by coursework

Research Led Learning

- My Task
  - To make it clear what the scope of your learning should be
  - To provide an indication of the depth of learning required
  - To structure some learning activities (lectures, reading, practicals, seminars etc.) to pace you through your learning
  - To ensure that you have access to the resources required
- Your Task
  - To decide the depth to which you are going to engage and study this course (A reasonable evaluation of the core materials will get you an average mark)
  - To read/use the background resources and further appropriate resources to achieve the level of understanding you want. We expect you to spend around 6 hours a week of work outside lectures on this module.
  - You will be studying some of the latest research in the area. To understand this work if you need to engage with it at the same level as a researcher.

The research questions

- Every lecture I will suggest some of the research questions that are currently engaging the LT research community

- Make sure you understand the questions and research possible answers/approaches/solutions.

- The course web site (notes) will contain links to resources to support the lecture

- The examination will ask you to reference the literature in order to to discuss and evaluate your answers to some of these questions.
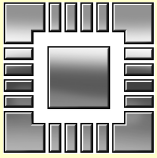
Today's Lecture

- The History of Learning Technologies
- The Social, political, organisational perspectives
- Some questions
  - How have Learning Technologies developed – what's the state of the art?
  - What are the barriers and drivers for the adoption of LT?
  - Pedagogic value? Can we teach effectively on-line?
  - What innovations have been made? Did they work? How do we know?

Timeline of Technology and Learning

1450 The invention of moveable type by Gutenberg in the 15th Century transformed society

1800 The chalk Board and Eraser

1827 The first photograph

1895 The wireless

1903 The first Motion Picture

1927 First TV

1938 First Computer

1947 First Transistor

1960 An early CAI system, PLATO

1960 The first video game is invented

1960 Xerox puts out the first photographic copy machine

1964 Development of BASIC programming language

1964 Graphical User Interface Developed

1967 Logo is developed

1967 Texas Instruments develops the first hand-held calculator

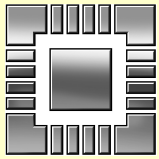1967 Early Frame based hypertext documentation

1968 Engelbart – Demonstrates ARPANET and the mouse

1969 Nelson & Van Dam hypertext editor at Brown

1969 Birth of The Internet

1969 Scholar - first Intelligent Tutoring System

1970 AT&T start selling Picturephone system

Timeline (2)

1971 Email

1972 Pong – the first computer video game?

1973 The first cellular telephone began operation

1975 Video Recorders (Betamax)

1975 The Altair 8800 leads the way for personal computers

1977 Pacman on the Atari

1977 Apple introduces the Apple II.

1997 Japan Victor Company (JVC) introduces the VHS format

1980 Aspen Movie Map

1980 The Whiteboard starts to replace the chalkboard

1981 The IBM PC and MSDOS

1982 Various HT systems using Full screen interface

1983 First Electronic Book

1983 MIDI

1983 TCP/IP

1984 The Mac

1985 Negroponte, Wiesner: opened MIT Media Lab

1986 BBC's Doomsday Project - Videodiscs

1987 Hypercard bundled with the Mac

1987 Microsoft Windows 2 (Not really an OS)

1989 Sim City released

1989 Nintendo Game Boy

1990 First appearance of a number of Hypertext systems using GUI interface (including WWW)
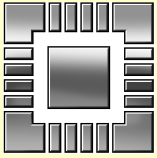
1990 CCITT standard H.320 for ISDN conferencing

Timeline (3)

1990 IBM, Tandy and AT&T announce their specification for a Multimedia Platform (based upon a 286 chip with 1M of memory and a 1x CD for mass storage)

1991 TLTP Projects in UK

1992 the first M-bone audio multicast on the Net

1993 NCSA Mosaic

1994 Netscape

1994 CU-See Me for PC and Mac

1994 The Psion Organiser – first PDA?

1994 University of Southampton start teaching distance MSc via Internet

1995 SPs go private and Internet expands beyond Military, big business and Academia

1995 Alta Vista – first world wide search engine

1996 -Microsoft, Internet Exploder.

1996 MP3

1997 Blackboard founded

1997 Berners-Lee announces the semantic web

1998 eLearning at a distance becoming popular – Phoenix and Cisco virtual universities

1998 Google

1999 Introduction of Apple QuickTime and Microsoft VFW

1999 Microsoft NetMeeting

1999 First version of MPEG-4

1999 IEEE 802.11b

1999 ADSL and uptake of ISPs

2000 First Silicon Chip implanted in Human Nervous system
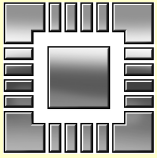
Timeline (4)

- What would you add in the since 2000?

  2001 Wikipedia

  2002 Really Simple Syndication (RSS)

  2003 Windows Mobile

  2004 Facebook

  2004 Google Scholar
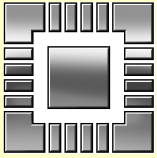
  2005 Podcasts

  2005 YouTube

  2007 iPhone

A Glimpse at the near future?

A Day in the Life of a Student

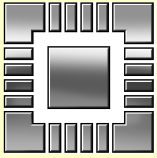(A powerpoint presentation made in 2002 to highlight the research issues in Learning Technology)

Some other links:

- Education Today and Tomorrow: created by Tom Woodward of Henrico County schools in Virginia.
  http://www.youtube.com/watch?v=NLlGopyXT_g&feature=user

- A Vision of Students Today: Created by Michael Wesch in collaboration with 200 students at Kansas State University
  http://www.youtube.com/watch?v=dGCJ46vyR9o&feature=related

Stakeholders in Higher Education
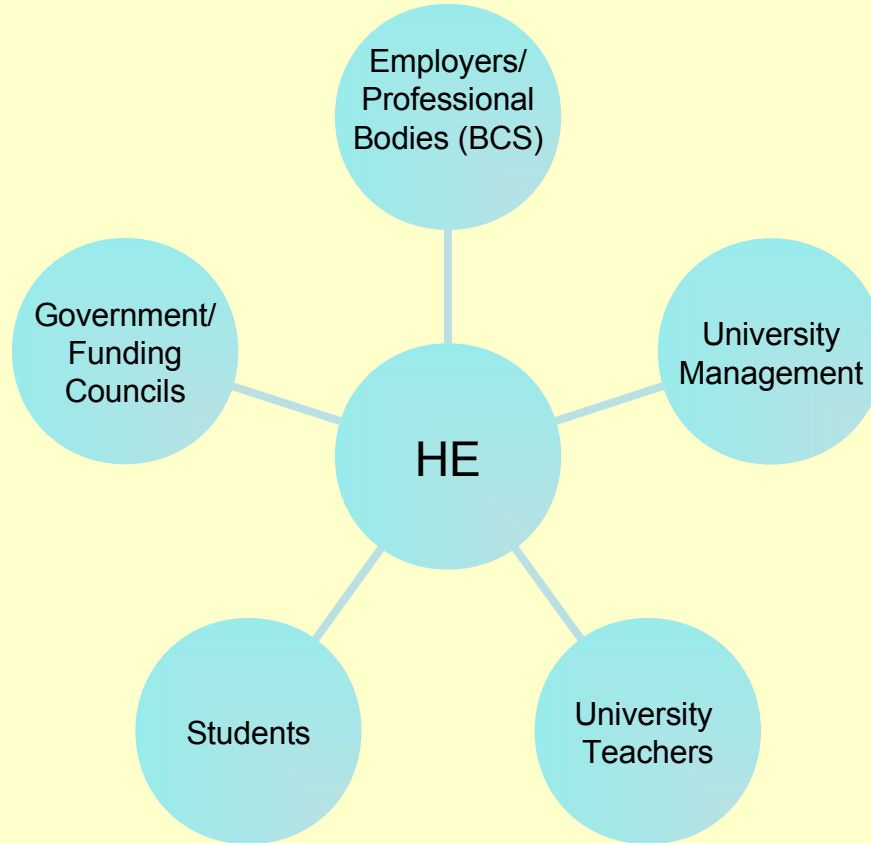
Your Task for this week

- Get yourselves into working groups
- Between now and next lecture answer the following questions.
  1. From the perspective of each of the stakeholders, list reasons why they would wish to see leaning technologies/ eLearning used.
  2. List reasons why any of the stakeholders might raise barriers to the use of technology and eLearning.
  3. How would your answers differ if we had been dealing with the Stakeholders in Industrial Training?
- We will use your results to build the answers next week