

Technologies and the performative nature of learning and knowing

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HÖGSKOLAN I BORÅS
INSTITUTIONEN BIBLIOTEKS- OCH INFORMATIONSVETENSKAP
BIBLIOTEKSHÖGSKOLAN

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Characterizations of our time

- The knowledge society
- The information society
- The network society
- The digital age
- The electronic age
- The Technetronic age
- The post-industrial society
- The super-industrial society

A society characterized by

- Globalization
- Technological innovation and change
- Social and demographic changes
- Rapid development of life-styles and work practices
- Instability and transformations of many activities
- International competition

Learning/human development



- The issue of how people come to share the experiences of their society through various forms of communication, interaction and social activities, and how they are able to exert agency in social practices by drawing on "the funded capital of civilization" (John Dewey)

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Learning, knowing and media

1. Technological development
2. Development of social activities relating to technologies
3. Adopting of ICT in education
4. Ideological context of schooling
5. Transformation of learning vs. transformation of schooling
6. Emerging metaphors of learning

ICT and learning during the past 10 years: Some trends



- Some highlights
 - Technological development (mobility, increasing processing and storage capacity, software etc.)
 - Integration of digitized technologies (phones, computers, navigation devices etc.)
 - Interactive technologies
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Development of the Internet



- Commercialization and offering of services
- Proliferation of communication tools: Skype, MSN-messenger
- Web 2.0
- Blogging and the bloggosphere
- Facebook, MySpace, YouTube etc.
- Wiki-technology/movement etc.

Games and gaming



- MMORPG (Massively Multiplayer Online Role Playing Game)
 - World of Warcraft (WoW)
 - Age of Conan
 - Warhammer online
 - Anarchy OnLine
 - Enemy Territory Quake Wars
 - Lord of the Rings
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Challenges of the Internet development



- Internet as a place to be
- Internet as a socialization arena
- File-sharing and property rights
- Criminality linked to the Internet (fraud, grooming, phishing ...)
- Ethical dilemmas

If we turn to schooling and education?



- Strong pressure to adapt to the new technology and the new tools
- Equipping schools with computers, broadband and other resources

but still ...

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But we still find ...



- Adoption of ICT in educational practices is very uneven
- Schools with 'low-level problems' and lack of enthusiasm
- Innovative practices built on ICT die out (sustainability problem)

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Following the IT-crash in 1999



- Digital technology has been influential in transforming many work practices and activity systems (banking, production, administration, book-keeping, travelling etc.)
- But the picture when it comes to schooling is much less straightforward

A paradoxical element in the development



- Terms such as information society, knowledge society etc. point in the direction of expansive and creative ways of organizing schooling

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- The monitoring of educational achievement has gone in a different direction (audit society)
 - International comparisons of performance
 - TIMSS, PISA, PIRLS etc
 - No Child Left Behind Policy (NCLB)
 - Rankings of universities and other educational institutions and systems

So what are we as researchers to make of this?



- We are dealing with a complex situation
 - Institutional traditions of definitions of learning, knowing, skills etc. (transmission metaphor)
 - We have an assessment system which is modeled on a metaphor of learning where knowing and skills are defined within an ancient and strong historical tradition
 - Product oriented metaphor or knowledge
 - Learning in many activities has changed, but perhaps not so much studying

Role as mediators and midwives



- Supporting the development and spread of productive use of ICT in educational practices

and

- we need to explore and understand the logic of change in education as an activity system (Cuban-agenda)

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- One element of this is to try to promote other modes of conceptualizing learning and to search for other kinds of indicators of learning

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- A critical factor in the expansion of the funded capital of society is the development and increasing sophistication of
 - External symbolic storages (ESS)
 - Artificial memory systems (AMS)

External symbolic storages (ESS) Artificial memory systems (AMS)



- Texts, books, libraries
- Maps and charts
- Images
- Registers
- Digital tools
- Databases
- Instruments
(calculators,
compasses,
navigators etc.)

All ESS/AMS rely on



- Socialization into *interpretive practices* and *interpretive communities*
- processes of reification/fixation of meaning
- The act of using objectifications as a creative process



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Characteristics of ESS/AMS



- Exist in public space
- Are relatively permanent
- Can be used repeatedly
- Are unlimited in their capacity
- Organized on the basis of explicit and (semi-)public rules
- Use relies on socialization into specific meaning-making practices

- One of the interesting factors which has changed recently is *access* to such resources

'Externalization' or objectification of

- Information (texts, databases etc.)



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'Externalization' or objectification of

- ... Information

vs.

- human thought processes

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Externalization of cognitive functions

- Computer software (spell and grammar checks, statistical analysis packages etc.)
- Search engines
- Book-keeping software
- Graphical calculators
- Facerecognition devices
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Transformations of learning

- We master complex tasks without understanding the sequential steps
- Technology functions as a 'black box' (trust)
- We increasingly learn from the 'complex' to the 'elementary'
- We 'understand' as part of practices, we do not necessarily 'understand' as part of hierarchically organized knowledge (such as in the disciplines)

Interpretations of learning in the digital age

- Meta-communicative and meta-cognitive skills (modelling)
- Learning becomes increasingly 'conceptual' and 'procedural', but in coordination with material cultural tools
- Learning is the ability to transform and recontextualize in manners that are relevant for local needs, i.e. learning is in the performative

Elements of a different metaphor of learning

- ... as problem solving
- ... as consequential and performative
- ... modelled on the metaphor of research