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Technology in education - possible positions for educators

Point of departure

- 20+ years in higher education
- Concerned with how technology can make a difference in teaching, learning, collaboration and education in general
- Today's talk will focus on 'the digital dimension' of teaching and education and the dilemmas it poses

Technology:

- Not a 'black box'
- Technology and use of technology are interdependent and influence one another
- Technology as well as the use of technology can be designed / planned for

Reasons given for technology in teaching and education

- Learning outcome
 - Learn in new ways
 - 'Better' learning
 - Learn new things
- Ressources
 - Learning becomes more effective, e.g. faster
 - Teaching becomes cheaper, e.g. by teaching larger groups, increased reuse of materials, reduced need for teachers
 - More ressources can be included, e.g. people or places
- Technology
 - The technologies are there, therefore we should use them in teaching (deterministic stance)
 - School / education needs to mimic the surrounding society
 - School needs to mimic life outside school (to accommodate the so-called digital natives)

What is the problem?

- Many voices talk about the potential of technology (incl. research)
- We assume educational technologies will bring *benevolent* changes to education
 - better learning, student-centred pedagogies, enhance motivation, will prepare students for the 'future'
- However; 'future' is not a set path – the future of education is a struggle, and technology might mislead us! (Ryberg, 2018)
- Edtech is political (as is education)
- Edtech vendors, commercialisation of education, educational programs that battle for the attention of potential students, researchers looking for funding, etc.
- Edtech is part of this complicated game

Educational paradigms

Anglo-Saxon curriculum tradition	Continental Bildung tradition
<ul style="list-style-type: none"> • Goal oriented curriculum • Effective teaching with predetermined and measureable learning content • Learning as a linear movement 	<ul style="list-style-type: none"> • Bildung • Personal as well as professional competences • Independence and critical thinking vs. knowledge- and skills acquisition
Teacher: 'Invisible agent in the system'. Carrying out the curriculum most effectively based on scientific principles (Westbury, 1998)	Teacher: Interpreter of curriculum and professional practitioner (professional judgment). Works within, but not controlled by the curriculum (Westbury, 1998)
Science	Arts
Broadcast	Discussion

History of #edtech not a neat and orderly progression – rather a struggle between perspectives / pedagogical ideals (Weller, 2007)

Broadcast view

- Deliver or make content and resources globally available - on demand
- Self-paced, individualised
- Reuse, scalability, cost efficiency (reducing the role of the teacher)
- Also: Control, standardisation, institutionalisation, industrialization
- **Mainstream**

Discussion view

- Knowledge through dialogue, collaboration and communication
- Mutual dependency or relations between students and between students and facilitators
- Groups, closeness, relations, cooperation and collaboration – dependency in time
- **Fringe**

The pedagogical problem

- Most edtech used in Scandinavia is designed and shaped within an Anglo-Saxon (also US) context
- These technologies (often) apply a goal oriented understanding of learning (science vs art), as seen in gamification and most learning platforms
- Edtech is often the answer to questions which no educational researcher or teacher has ever asked
- Edtech is (still) primarily driven by a technical agenda, rather than a pedagogical or educational one

Food for thought

- Technology builds on as well as creates particular subject understandings, practices, rationalities and ideals
- What understanding of learning and teaching come with the tools?
- Which implicit learning philosophies are part of the source code?
- Who can influence the development and implementation of edtech in institutions? Teachers; administration; management?
- What is needed to understand and decode the data we produce as we use edtech?
- Do we fully understand the basis for decision making?

How to maintain a pedagogical focus?

- We don't want technology to be the driver
- However, too often we see that learning designs with edtech merely enhance existing practices
- Lack of technological experiments can be the cause of conservative use of edtech
- In order to be pedagogically innovative we need to understand the potentials and limitations of technology

(Some) questions we should be asking ourselves

- What problems are we seeking to solve through the use of technology?
- Whose problems are they: Teachers, management, administration, students?
- Which pedagogical ideals and philosophies should drive the change?
- Technologies may change → how do we secure consistency in pedagogical ideas and strategies in institutions?

Thank you

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