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# Situated learning in the Network society

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## Abstract

*There is a need to develop a broader view of knowledge for dealing with the way in which new digital trends influence the underlying conditions for schools, pedagogy and subjects. This short commentary article, based on my paper at the* NVU-conference 2008*, will therefore highlight whether a broader view of knowledge - situated learning, digital literacy and the digital revolution can generate new ways of how we perceive pedagogy within the new educational reform in Norway in particular and the digitized school in general. The focus is particularly angled towards the implications this may have for developing new practises for teachers and students.*

**Keywords***:* ICT, digital literacy, situated learning, digital epistemology, new practises

## Introduction

The main thread through the annual *NVU-conference* this year was collaboration, sharing and feedback, and if we see an emerging new practise among teachers and students in the Norwegian educational system. The different papers highlighted these issues from different angles, but at the same time shared a common consensus that the Norwegian educational system faces a number of challenges in regard to handle the digitization of society, universities and school. One of the main reason for this situation is that the digital revolution and the ever increasing digitalisation of school life have altered some of the conditions under which our educational system operate compared to before the digital revolution in the beginning of the 1990's (Krumsvik 2006). Several of the papers at the *NVU-conference* highlighted this situation and the need to reconsider what the terms *knowledge*, *knowing* and *know-how* are in 2008. Therefore several of the papers claimed that there is a need to develop a digital epistemology which can capture a broader view of knowledge to encapsulate the impact of the latest digital trends on the underlying conditions applicable to our universities, schools, pedagogy and subjects.

My own paper at the conference, *Situated learning in the Network society*, set out to discuss whether – and if so, how – a wider view of knowledge, situated learning (Lave & Wenger 1991) and digital literacy can create new approaches to how we view and assess knowledge in the digital age and in relation to the Norwegian government's Knowledge Promotion Reform (KD 2006). ICT and digital literacy occupy a prominent position in this new reform package, and

enshrining these two areas so clearly in the curriculum puts Norway in a unique position internationally. Meanwhile there is little doubt that the digital revolution has provided pupils with good access to technology in and outside school, giving them a sense of self-confidence in relation to digital media (Knobel 1999; Krumsvik 2006, 2007). The result is that formal and informal learning arenas are blending together in both physical and virtual learning spaces. A focal point in my paper was the question of what distinctive marks we can find within situated learning in the Network society which occurs as a consequence of the blending of formal –and informal learning arenas. However, teachers still lack the necessary digital literacy to manage ICT and the new learning spaces central to the Knowledge Promotion Reform (Arnseth, H. C, Hatlevik, O., Kløvstad, V., Kristiansen, T. & Ottestad, G., 2007). This makes for a situation in which digital trends, new learning spaces and K06 (KD 2006) are paving the way for new educational approaches and assessment forms, while a number of apparent obstacles prevent these approaches from becoming a reality.

## The digitization of society and school

My paper highlighted that the digital revolution has produced radical changes in the Norwegian society since the mid-1990s, and the school system too has been affected by these developments. A British study, *Personalisation and Digital Technologies* (Green, Facer, Rudd, Dillon & Humphreys 2006), provides an insight into the extent of this digital revolution. The study forecasts that today's average British school-age child will, by the age of 21, have spent 15,000 hours in formal education, 20,000 hours watching television and 50,000 hours in front of a computer screen. Although this is merely a prediction, it nevertheless provides an indication of the extent to which today's "screenagers" (Rushkoff 1996) use the media. Much of this media use is entertainment-focused (which makes it difficult to distinguish between entertainment and learning), but more and more observers are asking themselves whether any of it might be relevant to school activities. The basis of this notion is that pupils are acquiring digital self-confidence through frequent ICT-use, which implies transcontextual aspects (learning that takes place in and between multiple contexts, Lave & Wenger 2003). "Digitized", situated learning may represent a new form of knowledge building that may be relevant in a school context, both as a theoretical lens to understand this digitization of society and school and for developing a new, broader digital epistemology which have to reflect this new digitized, knowledge building.

If we look more closely at the situation in Norway there is little doubt that the digital revolution has made its mark both in society and in the school system to an even greater extent than in other countries. In recent years Norway has been one of the highest-ranking nations in respect of technology penetration in society (Castells 2001; OECD 2001, 2003; Vaage 2005; Vaage, 2007, 2008; Utdanningsdirektoratet, 2007). According to the report "Broadband Coverage analysis 2007" (FAD 2007) 98, 3% of Norwegians today have the possibility to be connected to broadband and 60% of Norwegian households are connected to broadband in 2007. Other societal streams in Norway make it reasonable to say that within 2009 over 90% of the households will be connected. A recent European study ranked Norway highest in terms of digital skills among the population – and lowest in terms of those lacking digital skills (Eurostat 2005). In upper secondary school we find that it is 1,7 pupil pr PC and for the first time in Norwegian history the majority of the pupils who started in their upper secondary education in 2007 got their own laptop free of charge by the government (Utdanningsdirektoratet 2007). 41% of these pupils are using five hours or more every day in front of a screen (PC or TV) in their leisure time outside school (Vaage 2007). For the elementary pupils (9–16 age group) the tendency are the same and digital learning resources are increasingly replacing textbooks for homework (SAFT 2006). 88% of 10-years old kids and 99,4% of

16-years old youngsters got their own mobile telephone (Telenor 2007). And in school digital literacy have enjoyed a historic rise in their academic status, becoming the fifth core competence to be incorporated in all subjects at all age levels under the Knowledge Promotion Reform. As a result of this Norway has a particularly good starting point, which presents opportunities, challenges and dilemmas in the running of schools. The question that arises is to what extent this has any impact on young people's learning, and whether we really know enough about what constitutes knowledge accumulation among young people (screenagers) today. A number of previous studies showed that ICT had had little demonstrable effect on young people's learning, so there is reason to be sceptical of simple conclusions in this regard (Cuban 2001). At the same time we are seeing the digital revolution and the massive transcontextual use of media by young people paving the way for different, indirect approaches to learning than under the previous curriculum (the 10-year comprehensive education curriculum) (L97) (KUF 1996). Although we can identify only a vague outline of what this might imply, the British report mentions that schools must show "[...] an awareness that many learners today are already creating personalised environments for themselves outside school using digital resources" (Green et al. 2006:4). Looking at this in the context of the previous curriculum (L97, KUF 1996), we have to consider the extent to which schools should take more account of the digital world inhabited by today's "screenagers" outside of school. In contrast to 1997, pupils in 2008 move in digital fields comprising a number of digital and multimodal learning resources, networks, a user-friendly Web 2.0, online communities, new forms of communication, etc. that did not exist when the previous curriculum was introduced (L97, KUF 1996). As a consequence of this (and the digitization of society in general), *participation* in the Network society in 2008 means that the majority of Norwegian citizens are able to obtain almost all the services from public authorities through the Net (e.g. www.norge.no, www.minside.no, www.skatteetaten.no), communicate in new ways through the Net (Skype, chat, SMS, E-mail, etc.), has access to enormous sources of information and knowledge through the Net (e.g. www.wikipedia.org, www.naturfag.no, www.skolenettet.no, www.utdanning.no, www.viten.no) and at the same can present themselves through the Net (e.g. www.facebook.com, www.twitter.com,), have a "voice" in the public room through the Net (e.g. Internet blogs, discussion forums) and participate in Net societies (www.myspace.com, www.youtube.com). This establishes a lot of possibilities that we never have seen before and the majority of the screenagers have already constituted this on-line existence in this digital landscape as part of their *Bildung*-journey (Krumsvik & Støbakk 2007). This might also have impact on how these screenagers learn and therefore I claimed at the conference that never before the Norwegian society has been so prepared for a "digitized" situated learning than in 2008. With a swarm of digital learning resources, digital communities and people a "mouse click" away this constitutes a very good starting point to capture the informal learning that occurs for screenagers, even if we not today value it as "knowledge" defined from a traditional perception of knowledge.

However, the question one has to ask is if the rapid digitization of society and school will establish a gap between the majority of digital natives (the "Haves", screenagers) and digital immigrants (the "Have-Not's") , and if so, how do this influence human development for the digital illiterates, as well as teaching and learning in our contemporary society? Previous studies from the US showed that implementation of ICT in the USA has created an unexpected side-effect: "(...) the creation of a technological underclass in America's public schools" (Cuban & Tyack, 1998, p. 125).This digital diversity followed traditional socio-economic and cultural "trails" and created new problems for already vulnerable schools and pupil-groups. Another study from the US "*Computer and Internet Use by Students in 2003"* revealed the same tendency as before and found that digital divides was closely tied to socioeconomic status of the

pupils parents, their family income and by ethnicity (DeBell & Chapman 2006). In a report from the Organisation for Economic Co-operation and Development [OECD], *Understanding the Digital Divide* (2001), the same dilemma is highlighted for European conditions, where "falling through the Net" threatens certain groups. As a consequence of this we can ask if *access* and *participation* has become so important ground pillars in our Norwegian society, that the citizens and pupils who do not have necessary access to technology at home, at school and in spare time, actually experiences that they are digital illiterates and in many ways are segregated from the mainstream society. As a consequence of this they are also hindered to participate in the "digitized" situated learning which occurs "anytime, anywhere and with anyone" because of the digitization of society and school, as well as peoples in general on-line existence. In Norway this situation is difficult to grasp, but we can observe some emerging digital inequality among minority pupils in school (Frønes, 2002) and parents and youngsters from lower socioeconomic family status (Vaage 2008). Several teacher educators and teachers state that the Mathew effect (Merton 1973) is already possible to observe among pupils even if this digitized society is only "ten years old": pupils who are doing well in school in general are using the technology to more subject-related activities; pupils who achieves rather bad in school are using the technology more to entertainment. This might be the "back side of the medallion" of the digitization of society and school and needs to be considered seriously if we mean something with the ground pillars in the Norwegian unitarian school: Inclusion and adapted education. Therefore we see that our schools need to be aware of how that they can equalise some of the digital divides. They might use a strategy of increasing the subject-use of ICT in the subjects, relate adapted education to such issues and give access to school computers after school time for vulnerable pupil groups.

As a summary of my paper at the *NVU-conference* this indicates that we face a number of possibilities, challenges and dilemmas in this new digital educational landscape in Norway and where both the need for a digital epistemology, increased digital literacy among teachers and awareness for digital divides has to be considered in light of the digital revolution. If one considers these issues more seriously, we might be able to realize the main topic for the conference: establish new practices for teachers and students based on collaboration, sharing and feedback across formal – and informal learning spaces. In that case situated learning becomes more than good intentions – it might be a useful lens to understand "how teachers teach and learners learn" in a digitized society.

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