Commentary on a Nordic Perspective on ICT in Teaching and Learning

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This special issue of the Nordic Journal of Digital Literacy, based on the NERA 2013 symposium hosted by the journal, captures nicely how our understanding of learning opportunities expands beyond the traditional institutional settings of formal education. Ola Erstad’s article moves beyond the constraints of the classroom and conceptions of formal versus informal learning, while Tuija Marstio and Susanna Kivelä discuss collaboration between higher education institutions and local enterprises. Both these contributions include actors and spaces outside the physical boundaries of the educational institution.

Barbara Wasson and Cecilie Hansen report on a study showing that teachers from a Nordic country are more advanced in their use of ICT than colleagues from other countries. We also know that Nordic schools are well equipped compared to most other countries. But we are still a long way from taking full advantage of the possibilities – Wasson and Hansen conclude “that we have reason to be cautiously optimistic for the future of ICT use in Norwegian schools”. School infrastructure investments and upgrades, hardware purchase and maintenance, software deployment, content management, user administration and support, these and more are all the mundane but costly and demanding issues that must be in place for making meaningful use of ICT in teaching and learning.

An indication of how we might approach part of this challenge is illustrated by the technologies discussed by Gréta Björk Guðmundsdóttir & al: Tablet computers and interactive whiteboards. Informally, we might regard these two interactive technologies as representing a more general shift in ICT uptake in the educational sector. Schools used to purchase devices originally intended and designed for the office workers in the public or corporate sector, such as desktop computers or interactive whiteboards. Today, we find devices originally intended for entertainment and the private consumer market in our schools. We see large-screen television combined with network appliances for displaying digital content such as Apple TV replacing interactive whiteboards, and we see tablets replacing or complementing laptop computers. It is tempting, then, to speculate whether this might mean that we get more user-friendly and less expensive digital equipment, as well as a reduced demand for technology support in our schools.
Allowing students to use their own devices such as laptops, tablets, and smartphones at school can reduce the demands on the schools. This practice is named "Bring Your Own Device" (BYOD), and is probably about to become important part of how we use ICT in the Nordic educational sector. Tablets are seen to accelerate the pace of BYOD, as they are smaller and less expensive than laptop computers. Touchscreen computers such as the iPad, Galaxy, Surface, or Nexus are currently prominent examples of such tablets. A Nordic perspective on ICT in teaching and learning is a perspective that encompasses more than the traditional classroom. BYOD policies facilitate pedagogical practices where a more seamless technology use across contexts is useful, as it gives students the opportunity to use the same device both in and out of school. In a global perspective, Nordic households are comparatively affluent, well outfitted with consumer electronics, and with extensive use of personal technologies. BYOD policies are therefore probably more practicable here than in many other regions. But we should not expect BYOD to be a quick fix. Equality is a well-established and strong principle in our school systems, and policies that entrench digital divides are not acceptable. Schemes for subsidizing some students should thus be part of Nordic BYOD strategies. Other difficulties that must be dealt with in implementing BYOD include for example issues related to increased heterogeneity in devices, operating systems, and software.

Some of these technical issues can be resolved by cloud computing. Complications from students using many different devices may be resolved by making use of on-demand services that are accessed through the Internet and only requires a browser. File storage and sharing as a service from vendors such as Box or Dropbox are utilizations of cloud computing, “software as a service” (SaaS) is another. SaaS offerings include office application suites found in e.g. Google Apps, wikis for collaborative writing, or more specialized tools such as the video creation tool WeVideo. Like BYOD, cloud computing is no silver bullet. Information security and privacy are two areas of concern that are both currently high on the agenda in the Nordic public debate and are especially accentuated by cloud computing.

New, affordable, touchscreen devices facilitate implementation of pedagogical driven initiatives of crossing traditional boundaries for learning activities by often being the "D" in "BYOD". Cloud computing, as a flexible means for providing a school’s technology portfolio, can make important contributions to teaching and learning in Nordic technology rich learning environments.