

# Chapter 1

## Twenty First Century Skills vs. Disciplinary Studies?

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### ABSTRACT

*This paper addresses the tension between a discipline-based and a skill and competences-based approach to today's curriculum. The competences-based approach emphasizes the cultivation of market-oriented skills and competencies that people acquire in the knowledge society; it is the driving force behind many educational reforms. The other, more traditional approach emphasizes the acquisition of well organized disciplinary knowledge such as history and chemistry. The differences between learning guided by pre-determined educational goals, designed to acquire disciplined knowledge, and the acquisition of daily, net-related interest-driven partly out-of-school skills learning is too large to be ignored. Each of the two approaches has its advantages and drawbacks but jointly they can constitute fruitful curricula. On the one hand, such curricula address the three main purposes of school – qualification, socialization and subjectification – while on the other they address the needs of cultivating 21st Century skills and competences. The latter comes to serve the attainment of the former.*

### 1. INTRODUCTION

*Knowledge is of two kinds. We know a subject ourselves, or we know where we can find it. (Samuel Johnson, 1750)*

The new digital world has led to significant changes in all walks of life, including in the school. It has been claimed that there is a need to cultivate new competencies, competencies that serve as “steering

instruments” for educational reforms. Specifically, *digital competence* has become a key concept in the discussion of what kinds of skills and understandings people would need in the knowledge society (e.g., Punie, 2007; see also Sefton-Green, Nixon, & Erstad, 2009; OECD, 2010). The policy documents for education in Norway elevate the concept of digital competence to a higher degree compared to other countries. The final version of the national curriculum (MER, 2006a) was central

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in regards to Information and Communication Technologies, ICT and educational technology in schools; it increased the status of ICT and the ability to use digital tools as the fifth basic skill in all subjects at all levels.

Indeed, it has become clear that with the rapid development of technology, the widespread access to endless amounts of information, and the appeal of these developments to education, much needs to change in the institution, curriculum, and practice of schooling. Similarly, the growing dominance of the Knowledge Society over the economy, communication, job markets, and financial markets should have profound effects on education. But how?

Two schools of thought and practice have emerged in response to the digital challenges: the more pragmatic and the more traditional. The basic premise of the more pragmatic school is that curricula need to be guided by the desired outcomes of school, based on market demands, and thus cultivate the mastery of market-oriented digital skills. Much like the way the younger generation engages digital media, school needs to be learner-led rather than knowledge-led. The emphasis ought to be on the mastery of skills and far less on scholarly knowledge that can best serve these digital challenges (e.g., Loveless, 2013). On the other hand, the more traditional school is based on the assumption that education is about enabling learners to engage with disciplined-based “powerful knowledge,” knowledge they are not likely to acquire out of school and that is important for them as future active and educated citizens (Young & Muller, 2010).

## **2. THE EMERGENCE OF DIGITAL COMPETENCY IN THE CURRICULUM**

The skills-and-competency approach defines the desired skills as *generic*, as the ability to search, produce, and communicate. More specifically: “It is the set of knowledge, skills, and attitudes

(thus including abilities, strategies, values, and awareness) that are required when using ICT and digital media to perform tasks; solve problems; communicate; manage information; collaborate; create and share content; and build knowledge effectively, efficiently, appropriately, critically, creatively, autonomously, flexibly, ethically, reflectively for work, leisure, participation, learning, socializing, consuming, and empowerment” (Ferrari, 2012, p. 3).

Two basic assumptions underlie the digital competence approach. First, it is assumed that today’s students learn differently and think differently from their older peers; the traditional ways of schooling—mainly the top-down delivery of ready-made bodies of organized knowledge—have become of lesser relevance. The nature of learners’ relationships with information and knowledge is changing—i.e., learning is increasingly based on principles of collective exploration, play, and individuals’ interest and innovation, and school has to adapt itself to such changes (Ulbrich, Jahnke, & Mårtensson, 2011). The implication of this is that the starting point for curriculum planning should be the needs and wants of young people rather than a set of predetermined, disciplined subject matter (Reiss & White, 2013). The knowledge is not imposed from the outside, but the competencies that learners already have are capitalized upon. Thus, the approach encourages teaching that draws upon a learner’s own experiences and “everyday knowledge” and, in turn, assists learners in using their new learning in their lives and work.

Secondly, it is assumed that the knowledge one needs can be easily accessed from the Internet and does not need to be learned (and then forgotten) in school. One learns from other sources at least as much. On the other hand, learners need to acquire skills of access, communication, collaboration, and processing with which they can gain the knowledge they want and need. In this respect, school is a node within a wider network of information and learning sources that spans from in school to out of school, from local to global, and is both physi-

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