

**From the Editor in Chief****TECHNOLOGIES TO SUPPORT LEARNING, WELL-BEING,  
AND COMMUNICATION**

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The Finnish information society, including its school system, is facing many challenges at the moment. Decision makers, such as representatives of the Ministry of Education and Culture, have raised lively discussion on the basis of the recent PISA results.<sup>1</sup> The trend among Finnish students' performance in the PISA study during the last decade is descendant. Altogether, the recent studies indicate particular worries related to both negative attitudes and lack of motivation towards learning among Finnish students, as these factors seem to be coupled with the performance and learning outcomes (Hautamäki, Kupiainen, Marjanen, Vainikainen, & Hotulainen, 2013; Kupari et al., 2013).

One of the suggestions for renewing our school practices is to develop innovative pedagogical and knowledge practices that also utilize technologies. Although technologies have been developed for educational purposes already for almost two decades, many practical questions remain outstanding. Certainly the issues of the availability (accessibility and cost) and demand for flexibility (time, place, and pace) in learning remain challenges for employing, for example, distance learning in most educational systems. Yet these are not the actual bottlenecks for the more widespread and productive use of technologies in teaching or learning. Rather, the challenge frequently relates to educators' hesitant attitudes toward their abilities in applying new pedagogical approaches and utilizing technologies to support them. Moreover, because traditional models of learning have not inspired researchers and teachers to develop innovative pedagogical practices, research and development work within the field has shifted toward a focus on creating many-sided pedagogical practices, specifically through utilizing technologies that can support students in their efforts for deeper learning and richer interaction. Research in the area of learning technologies has indicated both possibilities and challenges related to pedagogically meaningful use of technologies for learning.

The rapid changes, especially in networked technologies, have changed the way we learn, work, and communicate. Global megatrends, such as social media and massive open online courses challenge the traditional design of learning environments. Due to rapid technological

development, educational professionals now call for research-based, smart solutions to support learning and performance within formal and informal educational, work-related, and everyday contexts.

The “learn anytime, anywhere” approach, while offering much potential for innovative teaching and learning, is not without challenges. Certainly, ubiquitous computing can provide opportunities for embedding learning into everyday activities (Weiser, 1991). However, research and development work should focus on meaningful pedagogical use of mobile devices instead of merely users’ technical capabilities of them (Järvelä, Näykki, Laru, & Luokkanen, 2007). The focus recently has moved toward the interpretations of mobile devices as cognitive tools that can reorganize how learners think and engage in productive group interactions (Laru, 2012). Mobile devices, including tablets, handhelds, smartphones, can contribute in part to inspiring students toward inquiry learning in authentic learning settings (Meek, Fitzgerald, Sharples, & Priestnall, 2013). However, the responsibility of learning cannot be—and should not be—transferred to even the most advanced technology. Rather, effective learning presupposes learners with active and determined minds and willingness for collaboration, who engage in social academic transactions under the guidance and facilitation of a teacher. An engaged and skillful student does not adopt knowledge directly from a teacher or from a textbook, or even a digital source. Instead, the student actively conducts intellectual tasks and completes projects individually and together with peer learners. The role of technology in this process, then, is to assist and support the student in searching, analyzing, and creating knowledge, as well as in sharing the phases of the working process with others and with the teacher.

As stated above, despite a still fairly high level of knowledge and skills, too many children do not enjoy themselves at school (Hautamäki et al., 2013). Motivation, a key component of any learning process, typically waxes and wanes at the intersection of various learning situations and expectations, intellectual demands, peer interaction, and the student’s innate learning abilities (Covington, 2000; Gavrilă, & Palicica, 2008). Hence, the technologies considered for learning, working, and everyday environments should be developed not only from the cognitive, but also from physical/biological, emotional, and social perspectives.

The papers in this issue of *Human Technology: An Interdisciplinary Journal on Humans in ICT Environments* open up perspectives on the use of mobile technologies in learning in multiple areas. These studies investigate the mobile support of learning not only in regard to pedagogical change, but also as related to well-being and physical activities and affective communication research.

This issue begins with the article by **Rikala, Vesisenaho and Mylläri**, who have examined the perceived pedagogical opportunities and realized pedagogical potential of tablets in Finnish schools. Through their survey of teachers, they uncovered that the actual use of tablets in classrooms, in some cases, was perceived by the teachers as having a lower benefit than what they had thought its potential would be. Nevertheless, teachers remain optimistic that tablets can diversify and enhance teaching and learning, for example, by facilitating learners’ motivation and promoting student-engaging teaching methods and independent learning. Two of the biggest challenges in achieving these learning enhancements with tablets revolve around initiating new forms of learner-centered pedagogies and having a sufficient number of tablets available in the classroom to allow for pedagogical innovation.

**Edwards, McDonald, Zhao and Humphries** discuss in their article the applicability of the PRETAR framework in supporting explicit structuring of user-centered evaluation studies, using their recent study in the area of eHealth as an evaluative example. Their eHealth study aimed to provide adolescents with exercise-focused technologies to generate ideas on future technologies to increase motivation for and engagement in physical activity by themselves and their peers. Edwards et al. applied the PRETAR framework retrospectively to two areas of their prior study: the papers they used within their literature review, and then in evaluating the planning, execution, and reporting processes of their own field study. From this collective assessment, they confirmed the value of the PRETAR framework for improving the full cycle of research, particularly for field studies. Additionally, they highlight the benefit of using PRETAR within researchers' evaluation of the literature, to identify strengths and weaknesses of these foundational studies. More importantly, they affirm the value of this framework in retrospective practices to enhance one's own research for the future, by explicitly focusing on reviewing, planning, conducting, and discussing aspects of a study.

**Livholts and Bryant** examine mobile phones as an affective technology through which the voice conveys emotions, which then shapes and genders social space. They utilized a collaborative autoethnographic method to investigate their own telephone lives, uncovering how telephone-mediated social relations emerge within and through gender and generation, family and friendships, work and home. In their paper, Livholts and Bryant argue that methodological challenges reflect the complexity of inquiry into power relations and the role of emotions in the context of telephony. They suggest that the autoethnographic method can contribute to theorizing the context of everyday telephone use.

Included in this issue is our periodic public acknowledgement of the many people who make it possible for *Human Technology* to publish quality papers: our reviewers. These experts from around the world volunteer their time and their knowledge in evaluating papers for publication consideration. For manuscripts with publication potential, the reviewers offer concrete recommendations for improving the manuscript toward that end. As editors of an interdisciplinary journal, we at *Human Technology* rely heavily on field-specific experts who know best their particular human–technology research stream. As editor in chief, I am deeply grateful for their generosity in time and expertise and their important contribution to the many fields that make up the scope of *Human Technology*.

## ENDNOTE

1. PISA is the acronym for the Programme for International Student Assessment. The 2013 PISA results are available at <http://www.oecd.org/pisa/>

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