



The hurdles for adopting mobile learning devices in the clinical setting

Background

Since 2013 the University of Helsinki has given new medical students iPads for use in studies and privately.

Simultaneously, action research on mobile learning started and data on students' mobile device usage in studies has been collected among five student cohorts. In 2016, the first iPad-cohort commenced clinical studies and we observed a drop in their iPad use (Pyörälä et al 2018, Figure 1).

Aim

The aim of this study was to explore hurdles students encountered with mobile devices in the clinical setting among the two first student cohorts using iPads in their studies.

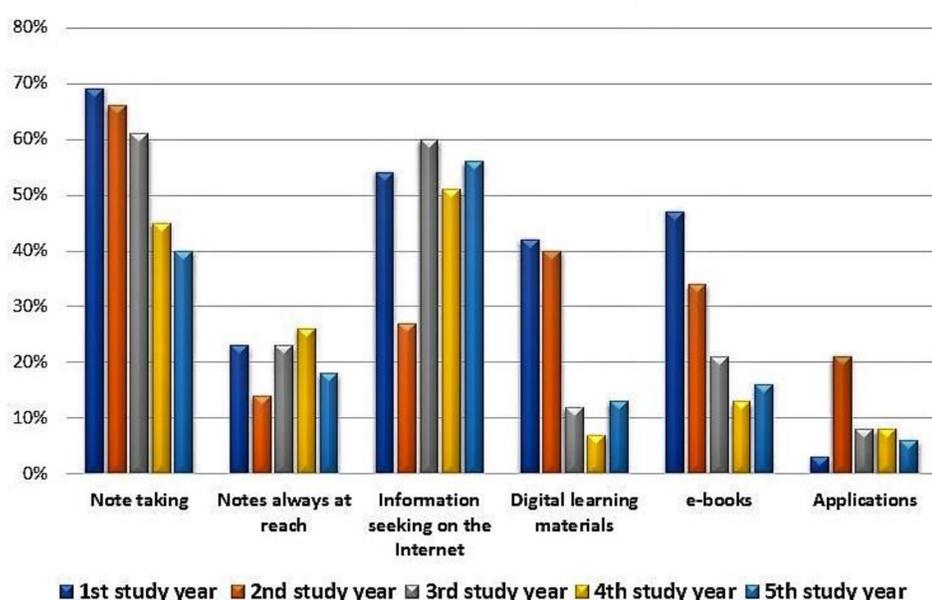
Materials and Methods

The data were collected with online questionnaires among 3rd and 4th year medical students in 2017. The response rate was 72% (N=86) and 90% (N=108) respectively. We examined open-ended question answers on suggestions for developing mobile device usage in clinical context by using qualitative content analysis.

Results

The main categories needing development were related to bed-side teaching and the clinical learning environment (Figure 2). The 3rd year students reported resistance towards usage of iPads as they entered clinical studies. Major hurdles identified were attitudes and the size of the iPad. Some teachers forbade using the device on the wards and students were ambiguous about using them with patients. Students lacked role-models for device use and desired learning environment digitalization. For example, uploading materials in mobile device-compatible formats before teaching as well as tests for self-assessment. Both teachers and students were concerned about the risk of infection transmission.

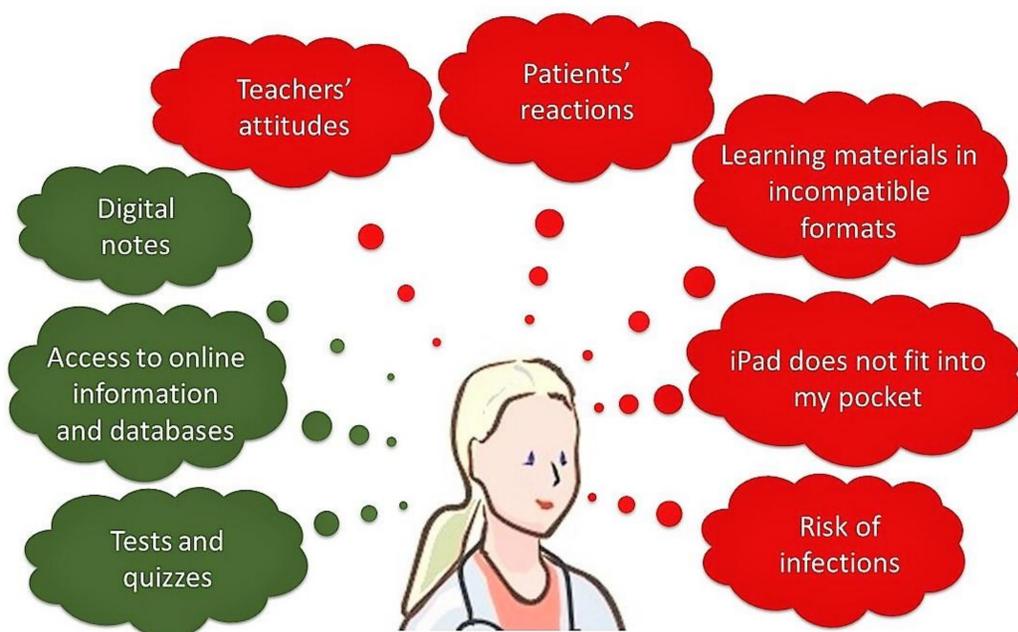
Figure 1. The most important study uses of mobile devices in the first student cohort.



Discussion

The clinical context is prone to resistance towards mobile technology in students' learning. We recognized similar impediments as previously reported (Tran et al. 2014; Patel et al. 2015; Dimond et al. 2016; Nerminathan et al. 2017). We identified hurdles related to both bedside teaching and the clinical learning environment. Attitudes towards mobile device use during patient contact was a key hurdle and problems in the learning environment centered around practical features such as device size.

Figure 2. Advantages of and hurdles for using mobile devices in the clinical setting.



Advantages in green and hurdles in red speech bubbles.

Conclusion

The window opportunity for adopting novel technology and practice in workplace learning is the initial phase of the clinical studies. Further research is required of the clinicians', other healthcare professionals' and patients' perception of the novel technology in the same environment.

Take-home message

Identifying the challenges for adopting mobile learning devices in the clinical setting enables us to discover feasible ways of using these devices, and to discover ways to make the most use of devices' potentials.