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Editorial

Mobile Learning—Trends and Practices

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Abstract: Mobile learning has become one of the more influential aspects in the field of educational technology given the ubiquity of modern mobile devices and proliferation of educational applications or 'apps' for mobile devices. Within this special issue, there are a range of studies and reviews which cover a breadth of current topics in the field, namely user motivations for using mobile learning, issues in evaluation and domain-specific considerations (e.g., use within language learning or audio-based applications). Together these studies represent the synthesis of a range of methods, approaches and applications that highlight benefits and areas of future growth of mobile technologies.

Keywords: mobile learning; mobile devices; educational technologies

1. Introduction to the Field of Mobile Learning

It is with pleasure that I introduce readers to this special issue of Education Sciences that is dedicated to 'mobile learning'. The field of 'mobile learning' is not intended to denote a special kind of learning. It is simply part of learning. However, the proliferation of mobile devices in our society has allowed mobile devices to be employed to deliver content and activities in which learning can be situated in a broader range of contexts than it has traditionally (e.g., in outdoor settings, in augmented reality, as well as 'just in time' or 'bite-sized' learning such as whilst travelling on public transport, etc.). This special issue encompasses a range of current issues related to motivation for using mobile learning, good practice in implementation and evaluation approaches, as outlined below.

2. The 'why' Question in Mobile Learning

One of the key questions for the use of mobile devices in learning is the 'why' question. Why bother with using mobile learning and what advantages do mobile devices provide in learning? Some key advantages highlighted within the field are the benefits of mobility, 'just-in-time' learning and location-based services, to name a few (see [1–8] for a review). This 'why' question has been probed within Yurdagül and Öz's paper [9], which argues that mobile learning is concerned with the mobility of learners and learning mobility rather than mobility of devices per se. They also highlight the advantages of 'just-in-time' learning in particular, demonstrating rapid access as a key advantage of mobile learning (44%) as well as ease of access (26%) in their survey findings.

Similarly, Elphick's iPilot initiative [10] also explored learner motivations in using mobile devices. The iPilot initiative provided iPads to students on a range of undergraduate programs over a two year pilot period. Surveys of students suggested that the overwhelming majority thought the use of iPads in education improved their digital literacy. Students were also found to be positive about the use of their iPads in learning (e.g., helping creativity in learning, increasing confidence, study efficiency, enjoyment, feeling connected with fellow students, helping communication with others, being more productive, experimenting with new apps and invaluable to studies). Students also do not rate potential disadvantages highly (e.g., low ratings for statements that suggested the iPad would distract or fragment learning). Furthermore, in comparison to non-iPilot students, the students suggested that

they were more likely to access learning on the move. Qualitative interviews also suggested that there were advantages in using the iPad that were not directly related to the designed learning applications (e.g., the ability to communicate with other students in group work via messages). In other words, there is evidence that the technical features embedded within mobile devices are useful for learners (even if not expressly designed with pedagogic activities in mind).

3. Do Mobile Devices Help or Hinder Learning?

The other key area is the issue of efficacy of using mobile devices for learning. We want to know whether mobile devices are generally helpful or a hindrance to learning? Two studies address these questions in this issue. The first is Cho et al.'s study [11], which conducted a meta-analysis of the use of mobile language learning technologies to examine two research questions: (1) What is the net effect of using mobile language learning technologies and (2) whether these effects differ as a function of moderator variables such as school level, source of study, context of study, type of test and target language learner type. In a rather robust and detailed quantitative analysis, they found an overall moderate positive effect of mobile device usage on language acquisition and language-learning achievement. Yet at the same time there were moderating influences on student learning outcomes in terms of type of assessment used.

The second study was that of Uther and Ylinen [12] which looked at applications that heavily relied on audio (i.e., music training and speech training). To this end, they compared the user perception of sound quality across devices when physical features are controlled, in order to investigate whether subjective changes affected user preferences for different devices. They found that there were significant differences in subjective sound quality that appeared to be influenced by device type, although the exact pattern of differences was different to previously published work with different demographic samples. Nonetheless, as per other studies, the degree to which these differences actually influenced the learning experience appeared to be limited. Instead, other features such as portability/convenience, etc. appeared to override users' impressions of quality in terms of learner preferences. Hence for learners, the degree to which they are influenced by subjective device/quality differences appears to matter little to their learning experience.

4. How to Evaluate Mobile Learning

Finally, in terms of evaluation: The 'how to evaluate' question, Koole et al. [7] compared two models of mobile learning: FRAME (Framework for Rationale Analysis of Mobile Learning) and the three level evaluation framework (3-LEF). The authors conducted a systematic review of publications referencing the seminal papers that originally introduced the models. In total, 208 publications referencing the FRAME model and 97 publications referencing the 3-LEF were included in their analysis. The authors concluded that these two models/frameworks were likely chosen for reasons other than philosophical commensurability, despite the fact that the FRAME model contains a more social-constructivist (and in latter iterations, sociomaterialist) emphasis and the 3-LEF a more socio-cultural emphasis. The authors posited that researchers may be using these models for reasons such as ease of use, rather than any particular need to evaluate from a particular philosophical position. The paper helpfully outlined potential advantages and disadvantages of each evaluation approach, which researchers may find useful to guide their choice of evaluation framework.

5. Conclusions

The field of mobile learning continues to evolve and yet the key questions of 'Why mobile?', 'Do mobile devices help or hinder learning?' and 'How can mobile learning be evaluated?' are continuing themes in the field. The studies presented in this issue provide a taster of current and continuing research themes in the field and are a useful source of information for practitioners and researchers in the field looking to develop further mobile learning applications.

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