

# Mobile Learning – Perceptions and Practices in Online Education

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## Abstract

Learning with the use of mobile technologies, which becomes more flexible, can effectively replace the static technologies of desktop computers, as referred to in the literature. On the other hand, academic environments arise as ideal for implementing, testing and evaluating pedagogical and technological innovations, including in the scope of mobile devices, allowing to prove or refute the technical feasibility and pedagogical possibilities of these devices.

But what perceptions do students and teachers have on the use of mobile technologies and mobile devices? And what practices of mobile learning do they engage in? By mapping and analyzing open access research, a mobile learner profile can be portrayed, using collaboration and interaction key features. In fact, both students and teachers are immersed in cultural and technological environments, where knowledge is built and shared as part of a social process.

Concerning the case of Universidade de Aberta, a distance and online public university, already working in a digital context, what is the place for mobile technologies and mobile learning? It is fundamental to consider a set of pedagogical possibilities that technologies offer to digital and networked learning contexts. In this context, faculty training is an important tool, and various strategies are already being developed.

We conclude that both m-learning and the faculty training at Universidade de Aberta are important opportunities to become aware of the need

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for educational innovation in higher education and to promote reflective thought in teaching and learning perceptions and practices.

**Key words:** *M-learning; Higher Education; Innovation; Teacher training; On-line Environments*

## **Introduction**

Learning with the use of mobile technologies, which becomes more flexible, can effectively replace the static technologies of desktop computers, as referred to in the literature. On the other hand, academic environments arise as ideal for implementing, testing and evaluating pedagogical and technological innovations, including in the scope of mobile devices, allowing to prove or refute the technical feasibility and pedagogical possibilities of these devices.

Before looking into the case of Universida de Aberta (Open University of Portugal), we will consider the place for mobile learning and mobile technologies in education by briefly looking at a knowledge systematization on the students' and teachers' perceptions and practices in online environments.

### **M-Learning: students and teachers' perceptions and practices**

Nowadays, most people, including students, have mobile devices. But, to what extent do they use their own mobile devices for learning activities or school work tasks? And what mobile technologies, if any, do they use for such activities and tasks? These questions led to a systematic literature review on Portuguese and international case studies and research related to students' and teachers' perceptions and practices on mobile learning, available on open access databases, focusing on higher education contexts (Cardoso & Abreu, 2015).

Taking into account phenomenological perspectives, the students' perceptions and motivations with regard to using a smartphone were identified as follows:

- the rather quick and convenient access to the e-mail and the Internet;
- a "cool" and technologically advanced smartphone;
- a financial stigma and a stereotype of entrepreneurship.

Among these most prevalent perceptions and motivations, there was

yet no clear reference to social media and social networks, meanwhile popularized. However, students in general, and in particular those of Universidade de Aberta (UAb), don't use social digital tools to contact with the teacher. Instead, they prefer the forum on UAb's moodle e-learning platform or e-mail (Cardoso and Bastos, 2018).

Still concerning the students, the most important factors that explain their willingness to use a mobile learning strategy in higher education are the expectation of performance and the expectation of the effort and self-management of learning, mediated by age, gender, or both. Moreover, students use apps (mobile applications and technologies) to expand discussion beyond the classroom and to provide new ways to collaborate and communicate between them, as well as creating their own learning content. In other words, students have the possibility to take control of their learning in a different way, namely they will have the ability to engage in information and discussion activities, as an integral part of real life.

On the other hand, most teachers, in different educational contexts, still tend to perceive the use of mobile devices as traditional ways of planning the classroom activities. That is, for teachers and students alike, the use of digital tools is still very much associated to formal education and formal learning scenarios. The teachers who already use mobile devices and technologies (i.e. sometimes known as "digital teachers" or "technological teachers"):

- assume the role of online tutors;
- seek prior training actions for different purposes;
- become proficient in the use of mobile devices;
- reflect on its advantages and constraints in the context of formal learning.

Hopefully, all teachers will become aware of the potential benefits of using mobile devices and apps in the classroom, including in virtual classrooms, like in the Universidade de Aberta's distance and online teaching. m-learning is often referred to as a specific type of e-learning (Traxler, 2005, 2007) and has the potential to bring learning to individuals, communities and isolated countries.

### **M-Tools for Online Education: the case of Universidade de Aberta**

The Universidade de Aberta (Open University of Portugal) is a public university, founded in 1988 to act as a distance education institution. In 2018 the Universidade de Aberta (UAb) is celebrating 30 years of activity in higher

education (HE), offering graduate and post-graduate programmes (master and PhD programmes) in different scientific fields. UAb started with what is called the "second generation" indistance education (Anderson and Dron, 2011) and moved to online education in 2007. This change was implemented together with the conception of its own and specific Virtual Pedagogical Model (MPV®, 2007), which was applied to all educational programmes.

The construction of pedagogical scenarios based on ICT provides a privileged context for development and innovation in distance education. Technological advances are indisputable and their influence was naturally projected in the virtual pedagogical contexts that characterize distance education at Universida de Aberta today.

Learning in virtual environments presents important challenges for both students and teachers. The current network society puts us in permanent contact with technologies and the dissemination of information on a large scale. But when we think of learning scenarios, the pedagogical dimension developed in online contexts requires specific considerations. The role of the Internet and the technological tools in the educational process has, in the concept of "networked collaborative e-learning" (McConnell, 2006), a framework to consider, in that it refers to practices in which the dimension of collaboration takes a central place in this process.

Since the Virtual Pedagogical Model was developed, and a pedagogical model based on a single platform (LMS) was proposed, there were important developments regarding the so-called emerging technologies and pedagogies. In this context, it is fundamental to consider a set of pedagogical possibilities that technologies offer to digital and networked learning contexts.

In fact, technological environments are constantly creating new learning scenarios. Web 2.0 provided a space for active participation, interaction and collaboration among users, which, when applied in a teaching and learning process, creates the environment for research, participation, collaboration and cooperation among all involved, generating a very favorable environment for the joint construction of knowledge. Thus, the pedagogical work at UAb has been incorporating, with varying degrees of intensity, depending on the nature of the courses and the skills to be developed, tools and several forms of work.

An important feature of virtual contexts is permanent updating and adaptation. On the one hand, according to the pedagogical needs that arise as one builds and uses a given context, on the other hand, by the very demands arising from the constant evolution of ICT. This situation demands

a permanent attention to pedagogical innovation and faculty training. At this point it is important to remember what Fullan (2007) says about innovation in education. According to him, innovation has to do with (i) the use of new materials or technologies, (ii) the use of new strategies / methodologies, and (iii) a change in conceptions and practices. With these elements in mind, faculty training plays an important place in our strategy for pedagogical development, as we concluded next.

## Conclusion

The fundamental elements of UAb's Virtual Pedagogical Model (MPV®, 2007), such as the construction of learning activities, the importance of interaction / collaboration, online evaluation, require attention focused on the search for procedures and resources / tools that motivate students, increasing their involvement in learning and the results obtained. Therefore, each year a training plan is prepared, focusing on different topics and also with the perspective of sharing experiences and pedagogical practices, bearing in mind that most faculty members already have many years of experience in online education.

Specifically concerning the use of digital tools, the aims for this training are: (i) to increase the use of new tools to support teaching and learning, (ii) to explore the pedagogical potentials of new tools, and (iii) to improve the participation of students as producers of digital artifacts (and not just as consumers).

With the faculty training at UAb it is intended to develop new strategies to present contents, and to diversify tools that are used for online and digital assessment, as well as sharing knowledge and collaborative work. But with this training it is also intended to discover new ways to give more autonomy to students, and to foster their active role as producers of knowledge and artifacts.

In the last 3 years, among other topics, training sessions have focused in different technological tools:

- Gamification and serious games;
- Tools for video and audio recorder (Audacity, Freemake Audio, Freemake Video, Icecream Screen Recorder, Windows Moviemaker, Educast);
- Wikis in education;
- Digital Portfolios;
- Animation tools (Video Scribe);

- Collaborative tools (Padlet, Socrative);
- Moodle (in-depth exploration).

Training offers to faculty occasions to take part in professional development activities that can have impact in teaching and learning, as different studies in this field have already highlighted (see, for example, Stes, Clement & Van Petegem, 2007). The training sessions are based on technology demonstrations and hands-on workshops, giving teachers the opportunity to get familiar with various software applications. It is also an opportunity for HE teachers to become aware of the need for educational innovation in the university context, and to promote reflective thought in the development of their teaching.

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