Smartphones in vocational tourism education: Truly useful or just another reason to find new excuses

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ABSTRACT

This article describes a longitudinal study of vocational tourism students' perceptions of the use of smartphones before and after being given the devices. Data includes interviews and online learning diary data from a period of about 18 months (N=14). By providing smartphones for these extremely mobile students, the researchers mainly aspired to promote possibilities to reflect their learning and to improve communication between students and their instructors during their apprenticeship periods. The use of smartphones instead of laptops was an extra option, and not a necessity. Results show that despite quite positive expectations and first experiences, students' positive attitudes faded during the study. Most students did not take full advantage of the devices provided, and instead used them in quite a conventional way. Only a few students used their phones innovatively to help them with their work tasks during their apprenticeship periods.

Author Keywords

Smartphones, ubiquitous, mobile learning, contextual, vocational, tourism education

INTRODUCTION

Mobile learning has received considerable attention in recent years, as mobile technologies become more common and new devices become available each year with more capabilities, better and bigger screens, more capable hardware, faster browsers, etc. As smartphones are still quite new in the context of education, there are only a limited number of longitudinal studies in which the use of smartphones has been followed for a longer period of time. Looi et al. (2011) studied a class taking mobilised lessons over a period of two years, but such studies are otherwise scarce. Wu et al. (2012) reviewed mobile learning studies made between 2003 and 2010 and found that 86% of the studies resulted in positive outcomes for learning. The problem with earlier research concerning mobile devices and applications has been, in many cases, the fact that most of the experiments have involved the "WOW effect" – testing something new and exciting that most probably also has a positive effect on student motivation – at least in short-term experiments. Therefore, there is a need for studies in which the use of these technologies is followed for a longer period of time. Only longitudinal studies would show whether mobile technologies themselves still have a positive effect on learning after the "WOW effect" has disappeared.

The research setting of this study is a vocational tourism education program that has been physically moved to a ski resort 50 km from the main campus of the hosting vocational college (cf. Vuojärvi et al., 2011). The students in this program are extremely mobile, as a large part of their studies are located outside classrooms and one-third of their two-year degree programme consists of apprenticeship periods in tourism companies around Finland. Therefore, even without mobile devices, their learning would be truly mobile; mobile devices could simply make many tasks and communication outside classroom much easier. The definition of mobile learning by Pimmer et al. (2010) fits well with the situations and contexts these students face in their studies: "*the process of coming to know and of being able to operate successfully in, and across, new and ever changing contexts with and through the use of mobile devices*" (p. 2).

This paper presents a longitudinal study where students had the possibility to use smartphones for a period of about 15 months. Student perceptions about these devices were recorded through interviews in four phases, both before and after receiving the devices. The reason for providing students with smartphones was to make it easy for the students to reflect on their learning through online diaries, and to promote their communication with their peers and instructors during their apprenticeship periods. Like Looi et al. (2011) we are also interested in exploring the ways in which students take responsibility and ownership of their mobile devices and learning. Sha, Looi, Chen and Zhang (2011) state that learning with mobile devices "*involves more than technological or pedagogical considerations, and learner characteristics such as motivation and abilities in monitoring and controlling one's learning in different settings need also to be considered*" (p.2).

The research questions of this study were as follows: 1) How do student perceptions of smartphones as learning tools change as they get more experience in using them? 2) Does the possibility to use smartphones increase students' posting frequency in their online learning diaries?

DATA COLLECTION AND ANALYSIS METHODS

The data for this study was collected during a period of about 18 months beginning in the autumn of 2010 and continuing until late spring of 2012. The data in this study consists of student interviews collected in four phases from a total of 14 students (N=14, 13, 9, 12), as well as the online learning diaries (N=14) the students wrote during their apprenticeship periods at various tourism companies. The first two interviews included questions about students' attitudes towards the use of various technologies, including mobile tools, during their studies. The last two interviews included questions about students' real experiences of using smartphones in their studies and during their free time. The smartphones provided for students were quite basic (Nokia C6), with physical keyboards, and WLAN and 3G-connectivity. If students had their own smartphone, they were free to choose which one to use during their studies.

During their apprenticeship periods, also before receiving their smartphones, students were expected to write online learning diaries (WordPress blogs) where their assignment was to describe their tasks and duties at work, reflect on what they have learned and whether they have succeeded in achieving the goals set before the period started. The blog enabled their teacher to follow their work and developments at work, comment on their reflections, give guidance and otherwise communicate with individual students. All students were asked for informed consent (cf. Sieber, 1992) for the researchers to read their diaries, conduct interviews and use them as research data. All data were analysed using qualitative content analysis (Gray, 2004).

RESULTS AND DISCUSSION

Students' expectations towards the use of educational technologies were overall very positive during the first interviews in autumn 2010. More than half of the students (8/14) indicated that they were eagerly awaiting the chance to try different digital learning environments and mobile devices. Some were considering the devices' potentially positive effects on studying, some were interested in the technologies in general and some were especially hoping that mobile devices could make their learning processes easier.

"For example, I haven't ever had a phone that could be used for reading emails. It might activate students if you could be reached even when you are arranging activities for some group [outdoors]"

None of the 14 students interviewed had negative expectations towards educational or mobile technologies. For those who had neither positive nor negative expectations (6/14), the doubts stemmed mostly from the students' own uncertainty with technologies.

"I'm so helpless with all those devices that I don't know what will happen [...] I suppose they might [help] or I don't know"

Even before the students were given the smartphones, they were expected to reflect on their learning during apprenticeship periods in their online learning diaries. In an earlier study, students indicated that their low writing activity was because of a lack of Internet connections and/or the exhaustion after their long working days (Vuojärvi, Eriksson & Ruokamo, 2011). In most cases, however, students felt that they had various breaks and even time that they spent just waiting for customers – time that could possibly be used for study-related tasks. Therefore, smartphones were provided for students as tools that could help them update their blogs, communicate with peers and instructors, and provide a means for different modes of note-taking (pictures, videos or voice recordings), even "in the field". At least with smartphones, there should not be any more of the above-mentioned excuses for low writing activity.

Before receiving smartphones, students were questioned about the expected effects on their diary writing activity. Most (10/12) students thought that a smartphone would probably make updating their learning diaries easier. Some students also thought that smartphones would help in using their breaks more effectively, as they could easily make short notes of their work or take pictures of their projects with their smartphones, which would always be with them. Smartphones and 3G-networks would also solve the problem of insufficient Internet connections.

"I actually did have such times that there might have been even an hour when my job was just to wait – so in principle you could write – I certainly didn't have my laptop with me"

Only three students questioned the benefits of smartphones. Two students indicated that they would rather write their blog posts with a laptop. One student noted that the writing activity does not necessarily increase unless students apply themselves to the task.

When smartphones were handed over to students, it was made clear that they were free to choose which tools they would use for the tasks given by their instructor. Students were instructed on how the new smartphones work, and some basic applications were installed on each phone in order to ensure that less tech-savvy students also got an easy start with their phones. Support was available from the researchers if problems with the devices arose later. Once equipped with their smartphones, students' first task was a course on tourism product knowledge, in which their job was to plan, record and edit tourism-related videos (Eriksson, Tuomi & Vuojärvi, accepted). Therefore, students already had experience with their particular smartphones when they headed to the next apprenticeship period.

After the first two apprenticeship periods with smartphones, the students were asked about the pros and cons of their smartphones. The experiences were very positive and most of the nine students interviewed in spring 2011 indicated that the phones had been very useful.

"It was handy to use the [wireless] network at the workplace and to write and even to take some pictures"

"It seriously benefited me – there wasn't an Internet connection in [name of the ski resort] so I wrote part of my blog posts with the phone"

Even though some students had a few technical problems with their phones, they still were quite satisfied with their devices. Only two interviewees commented on the usability of the devices with a slightly negative tone.

"It might be useful – at least nothing negative comes to my mind"

"At least I can't think of that many unsatisfactory issues"

Students used their smartphones mainly for web browsing, blogging, checking their email and taking pictures. Only three students – all men, working mostly outdoors and out of the reach of WLAN connections – seemed to actually take advantage of their smartphones' capabilities during their apprenticeship period. They used their phones, for example, to inform their customers about weather forecasts or train timetables, to help communicate with foreign customers through the use of a dictionary application, or simply by making notes with the phone. Overall, it seemed that the period of about three months did not actually help these students, of which only one had owned a smartphone beforehand, to really take advantage of the capabilities the smartphones could offer. One woman stated this observation quite well:

"Just for basic stuff [phone calls and text messaging] and browsing the Internet […] taking pictures. […]I haven't needed a phone like that earlier so I can't use it for anything else then just for the basic stuff."

Less than half of the students interviewed used their phones to write new posts to their online diaries and there was no trend that would have indicated more active posting to students' blogs. The reasons for not writing were generally the same than before - with the exception that no one complained about the lack of Internet connectivity. One student gave the excuse that the blogging application in their smartphone was not working; however, students were also informed of the possibility to post updates to their blogs through email.

The last interviews were conducted after the students had already used their smartphones for a full year, in February 2012. There was not much change in the use of smartphones, and some students had even bought new and more advanced devices. When specifically asked about the educational use of smartphones it became clear that, in their experience, they did not use their phones very much in their studies. It seemed that some students thought that educational use includes only blogging and making videos; namely, activities that have been part of a previous assignment.

"Well, I don't know – there are just those couple functions or so – video recording and writing the blog"

"No – not actually. Those phones were provided for us so that we can write those blogs but I haven't written it at all [with a smartphone]."

Only a few students mentioned using email or communication through social media sites. Those that actively took advantage of the email application indicated that it was one of the best features that smartphones have, as it genuinely makes their communication more effective. Researchers expected that students would invent many innovative uses for their smartphones, but only one or two of the students actually lived up to these expectations.

"I took some pictures, then I used it quite a lot for information searching […]. During the apprenticeship period, working as a guide, I used a dictionary quite a lot and then one could show pictures [from the Internet] if someone had, for example, found some animal tracks – then I could show a picture of the animal – what does it look like and so on."

Although the idea of blogging using smartphones, e.g. during lunch or other breaks, seemed like a functional solution before and shortly after receiving smartphones, even for the students themselves, the reality was different. Students seemed to have problems motivating themselves to reflect upon their learning in their learning diaries. Many students just wrote one or two blog posts and/or a summary of their apprenticeship period. Some students also said that writing with the phone was not as handy as they first thought, and that they had problems with the blogging application. However, some of the students did use their smartphones for blogging and the blog posts could also have been sent through email. In the end, the results were probably mostly due to the student's self-regulative skills, motivation and perhaps also their ability to reflect on their learning. As Vogel, Kennedy and Kwok (2009) wrote: *"we can provide our students with a range of technological support and mobile device applications but this will not ensure learning"* (p. 483). Results of this study are supported by those of Vogel et al. (2009), who claimed that to engage and sustain students to apply mobile devices in learning, they should have an appreciation of deep learning as well as time management skills. Motivation also plays a key role in this equation.

CONCLUSIONS

Although mobile learning clearly provides possibilities for both formal and informal learning, the informal activities in particular demand quite a lot from the students themselves. Taking advantage of mobile devices and making use of, for example, the breaks in between work tasks, seems to require self-regulating and motivated individuals that are willing to put some effort into their learning. Therefore, the provision of students with mobile devices does not necessarily have any

measurable effects, at least in situations where their use is largely informal and not strictly controlled and directed by the instructor.

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