NON-CONVENTIONAL DEVICES IN TRAINING: USING A PSP IN A BANK SETTING

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Abstract

The paper presents a pioneering project about the use of a mobile device – Sony™ PlayStation Portable (PSP) – for the training of new employees in a medium-size Swiss bank, the Banca Popolare di Sondrio (Suisse). After some considerations about Mobile Learning, an overview is given on the studies about the use of PSP in education. Results of the pilot phase of the project are then discussed, highlighting the lesson learnt and the subsequent change at the tactic level.

Introduction

If the implementation of educational games for mobile devices is no longer a news, their use in structured educational activities is still in its early stages. A quick look at the current literature presenting and discussing the use of iPods, PDAs, cell-phones or game consoles in education shows that the emphasis is usually put on the device rather than on the learning process occurring throughout that device. The shift from the device to the process of learning seems to be important to recognize the so called "M-learning" as a research field in its own right (Masters 2008).

There is a common agreement in identifying M-learning as the field that considers the intersection of mobile computing and eLearning (Trifonova et al., 2005). It *"refers to learning opportunities through the use of mobile solutions and handheld devices which are connected to information networks*" (Yuen & Wang 2004: 2). Mobile devices are becoming more and more small, unobtrusive and functional: they accompany us in our everyday life and disclose continuing opportunities to handle knowledge and benefit from it. Thus, since their appearance, education scholars have wondered on how to use them for learning purposes.

The functions offered by mobile devices are not different from the functions of previous digital technologies: you can listen to your favorite songs from a CD as well as from an iPod, you can write an email from a PDA as you usually do with a laptop. What makes the difference is the change of boundary conditions. Mobile learning is also addressed as "Learning on the Go" or "Ubiquitous learning", because it allows an anytime and anywhere learning experience.

When digital technologies began to serve educational purposes – at the very beginning of eLearning -, it was quickly evident that the pedagogical strategies of *in praesentia* courses could not simply be caught and put on a computer. A change in the paradigm was necessary, because the "e" before "learning" made many differences. It was realized that learning could not be divided from the technology used ("the medium is the message", as McLuhan would provocatively say). M-learning joins today the same fate of eLearning: "*the most obvious use of mobile devices for educational purposes is, in fact, a direct application of the eLearning technologies on smaller devices instead on a desktop PC. […] Digital materials used in eLearning should be at least partially reused, but a specific adaptation is required for them to serve M-learning needs*" (Trifonova & Ronchetti 2003: 3).

The project here presented supports the above "paradigmatic" statements, by showing the changes occurred in the project design while shifting from an eLearning setting to a M-learning one.

PSP as an educational tool

While there is now a substantial number of case studies and discussions about the educational uses of other mobile devices (Pownell, 2004; McCombs et al., 2006; Clothey & Schmitt, 2008) and game consoles (Oura et al., 2008), only a few applications could be found in the literature for the PSP. One reason could be that PSP is a quite young device: it was first released in Japan in December 2004, in USA in March 2005 and in Europe only in September 2005. Some educational games have already been developed, such as the "*Passport to …*" series, a set of interactive city guides created with the help of travel experts at Lonely Planet, or *Hot Brain*, a game that helps the mind in areas like logic, memory, math, language

and concentration through puzzles and challenges. Sony itself has recently launched a competition in the context of BETT (British Education and Training Technology) 2009, the world's largest educational technology event: a PSP is offered as prize for the best idea on how to use the device in education.

The PSP "*is becoming the games platform of choice in British Schools*" (Boxer 2008), with nearly 100 educational and training institutions that started to use it extensively to develop learning activities in the last years. Most of the projects were promoted by Sony itself, which aims at extending the scheme, if it proves to be successful.

The leading pioneer institution is the Birmingham East City Learning Centre, which has been supporting since September 2007 the introduction of the device in a number of schools across all age ranges, including a special school for deaf students, for in class activities as well as for out of school ones (Healey 2008). In the Birmingham King's Heath Primary School the PSP serves different aims:

- it works as a whole class teaching and revision platform in Literacy and Science;
- it enhances visual literacy for 4-year pupils;
- it is used to record experiences of school trips, like the ones to the North Pole and the NASA Space Centre Florida, and to bring them back to the classroom.

In the Longwill School for the Deaf, the PSP helps pupils to improve signing development through the recording of signed vocabulary lessons or of their own signed stories. It is also a communication tool between school and home for deaf parents (Healey 2008).

The recording functionality of the PSP has also been exploited in the Holyhead Secondary School of West Bromwich (ConnectED n.a.), which first introduced it in a 8-year class as a research tool in Geography and History: students were asked to create a glossary of images – recorded through the PSP – looking around the city. In a second phase, the school launched a vertical tutoring initiative between students of classes 11 and 7 to support interaction both among different years students and parents at home.

The PSP was given a place also in the Building Schools for the Future (BSF) project, the ambitious UK Government's investment program aimed at rethinking secondary schools didactic structure, which started in 2005 (ConnectED n.a.). In this context the device was used by:

- the Autism Resource Centre to prepare multi-media induction materials and to communicate with the families to inform them about children's activities and progress;
- the Allerton Grange Physical Education Department for peer assessment: students recorded and evaluated performances of classmates during exercises for skill acquisition in cricket;
- the Temple Moor High School to support ICT lessons and to shoot dance lessons, in order to help self-criticism and refinement of work.

Similar peer and self assessment activities are the ideas carried out by the Harefield Specialist Sports Academy of London (Quinn 2008), which used the PSP for a year in two specific areas:

- in Physical Education to evaluate gymnasts' performance and to shoot "fitness video";
- in A level ICT to solve self-assessment quizzes.

Another interesting study is being developed by some Iranian schools (Shirali-Shahreza 2008), where PSP is used for improving English lab classes. In this project students are allowed to directly download on their devices English lessons movies from a central computer, and then view them in the lab or anywhere else.

No educational uses of the PSP in business settings have been found, except the one reported by the PlayStation official website, carried out by the HMS Collingwood Royal Navy, a specialist training centre for new recruits (ConnectED n.a.). They were trained in basic numeracy skills by recording math lessons and then making them available on the mobile device, in addition to Flash based tests and games, while on board ships, submarines or combat zones.

This brief overview shows that some uses of the PSP in education are recurring. It is preferred to the common video camera to shoot short videos, probably because it is perceived as easier to use and cheaper, it has a large screen – differently from other mobile devices -, it has a good energetic autonomy, and because it allows to directly view the recordings, thus enhancing analytical skills, peer assessment and enlarging studying time. Furthermore, despite its newness, the PSP is a well-known technology, which facilitates its acceptance as a learning tool. Thanks to the opportunity of wireless connection, and because of its limited typing functionalities, it is being most used to inform (e.g. teacher informing parents about their children's progresses) than to communicate. Finally, it is interesting to remark that, while in eLearning activities proposed through laptops enthusiasm usually vanishes after a few weeks, the enthusiasm for PSP remains high (ConnectED n.a.).

The project: training in banking and finance

In January 2008 the eLab, the eLearning service of the University of Lugano (USI) and of the University of Applied Sciences of Southern Switzerland (SUPSI) and the NewMinE Lab – New Media in Education Laboratory (University of Lugano), started a collaboration with the BPS (Suisse) to re-design its current training offer for the new employees through the integration of ICT. The bank grasped the opportunities given by digital technologies in education and was very well disposed to open to innovation. The Human Resources office played a central role in the commitment, convincing the bank's top management of the advisability of a change in the internal training strategy: by enhancing the flexibility of the learning activities, thanks to the personalization of contents and the partial elimination of space and time boundaries, time and logistic costs would have been reduced, and the HR office would have been able to better tutor and monitor the trainees during their learning experiences.

In the bank's training practices, new employees were usually introduced to the financial work throughout a number of in-site events and *ad personam* unstructured tutoring. They usually worked three months in each different sector of the bank, for a total training period of 18 months, in order to familiarize with the institutional habits and to identify the most suitable employment area for each of them. They were provided with a paper manual – produced by the Swiss Bankers Association – to get an introduction to the main financial issues, and relied on the informal help of their senior colleagues and on the daily practice to apply the learned theory. The HR office monitored their progresses directly through tests and personal colloquia, and indirectly gathering comments and assessments from the directors of the offices where the stagiaires spent their time. Due to the institutional growth and to the increase of the number of employees, the traditional training strategy was no longer adequate, because a time and costs reduction and a closer outcome monitoring were needed.

Based on these considerations, the following requirements for the new eLearning system were identified: it had to be flexible in terms of time, space and duration of the learning activities, it had to allow the individualization of tasks, to support interaction between new employees and tutors, to gather valuable data for the assessment of the users.

The technological choice for the new learning system took into consideration the strategic level as well as the tactic one (Cantoni et al. 2007). The former refers to long-term decisions, which shape the learning environment and determine how its actors will perform. The tactic level, instead, comprises short-term decisions about single courses or activities. If the strategic level is well planned, the tactic decisions are facilitated and the learning system can be easily adapted to new conditions and needs. Here, the choice was twofold: the main didactical materials were developed on a Moodle-based LMS and integrated with multimedia resources loaded on the PSP. Interactions with the tutor and among employees were assured by the LMS communication tools (chats, forums, etc.).

Both the LMS and the PSP allow for ease update and addition of contents, flexible plan of activities, implementation of new courses, personalization, thus seeming likely to be a good strategic choice. The tactic level is still changing and improving, since the project is in progress, according to a "learning by doing" design attitude. This is particularly true with respect to PSP applications, since up to now there are very few indications in the literature about its use in education.

The project: status and lessons learned

Both the LMS and the PSP allow for ease update and addition of contents, flexible plan of activities, implementation of new courses

During the first year of the project, contents and learning activities specifically devoted to new employees have been developed: a basic course covering basic financial notions, a course on the fight against money laundering, and a general presentation of the bank. A course about the new financial products offered by the bank is currently under development; it will be proposed to a wider target of bank's employees.

The LMS hosts content materials for personal study, self-assessment exercises, links to websites related to the topics, communication resources like forums and chats. The use of the LMS has been designed to support and better manage individual study and to facilitate interactions with peers and tutors.

The implementation of didactical materials on the PSP, on the other side, has evolved along with the project. In this paragraph the "lessons learned" on this topic will be presented.

Considering that the main added value of using a PSP is the opportunity of an anywhere and anytime learning experience, the intended tactic was to produce fast-consuming content materials. Initially the focus has been more on contents than on the multimedia functions of the device, so that short animations conceived as "pills of knowledge", i.e. summaries of the contents presented on the LMS, were developed, in addition to self-assessment exercises.

The pilot phase of the project took place along 4 weeks between June an July 2008. Each one of the 12 participants received a personal access to the LMS platform and a PSP with the contents, and took part to the introductory workshop organized by eLab. After the end of the pilot phase, all participants were invited to a half-day evaluation workshop, where their feedback about the new learning strategy was collected: participants were first asked to fill in a questionnaire to draft their general profile and to investigate their experience with both LMS and PSP, then a focus group was held in order to let them talk and compare their experiences.

Feedbacks were on the whole positive. The new technologies were very much appreciated, especially the PSP, which aroused the participants' curiosity, since they did not expect to be trained such way. They generally declared to prefer studying on paper materials but exercising and testing their knowledge through LMS and PSP, because of their interactivity.

The focus group showed that the PSP caused a sort of "gadget effect". As a matter of fact, it had an immediate success not only because of the acknowledgment of its functionalities, but mainly thanks to its technical and social perceived features. A gadget calls the attention because it is "cool": it is adopted thanks to its innovative capacity, creative style, friendliness and to the promise of helping in the accomplishment of tasks otherwise boring or more time-consuming. In addition, a gadget can become an icon, a sort of identification theme to attest one's belonging to a group. This is the case for the PSP, which helped the integration of the stagiaires into the work context, allowing them to say proudly: "my bank lets me study with a PSP!"

The PSP resulted to be used mainly at home during relaxing moments, mostly in the evening and during the week-end, or while travelling. A young woman significantly reported that she made some exercises on the PSP while waiting for the pasta water to boil.

Despite the satisfaction for the device itself, doubts arose about the proposed use. Financial issues can be hardly exemplified and summarized, because of the complex and sensitive nature of the subjects. Moreover, the PSP monitor is not convenient to read texts, even if it is larger than the screens of other mobile devices. Thus, the short summarizing animations were not used extensively, if compared to the learning materials provided on the LMS. Participants remarked that the PSP animations were mostly text-based – thus, uncomfortable to read – and too content-restrictive – thus, unsuitable to address financial subjects. On the other side, participants appreciated multimedia and interactive features of the PSP they experimented in the exercises and using the device for personal stuffs, like playing games or uploading music and videos.

Based on the participants' feedback, the focus was re-set. In the second phase of the project, the multimedia functions of the PSP have been stressed and more interactive materials developed. Three groups of multimedia materials are now being developed:

a. a "bank tour", that is a series of video clips where the different bank departments are presented by the respective heads;
b. a collection of lessons held by financial experts furnished with slide shows and notes illustrating important financial concepts or best practices;
c. self-assessment exercises in a quiz style

Figure 1 An example of self-assessment exercise (the "financial" version of the famous television game *The wheel of fortune*)

Conclusion

The project presented is one of the first attempts to use the PSP for educational purposes in a business context. As a mobile device, PSP helps to remove boundary conditions and allows an anywhere and anytime learning experience.

When designing learning activities with a mobile device its distinctive features have to be considered. While in the starting phase of the project the PSP was used as if it were a laptop, afterwards its multimedia nature have been stressed more extensively. Fast consuming interactive materials seem to be the most suitable form of contents.

The PSP is expected to help new employees to familiarize with the work context, to make them responsible of their own training and to promote institutional values. It also showed to be an identification theme, since it was perceived as a "cool" gadget and as an interesting innovation, adding fun and enthusiasm to the learning experience.

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