The use of GooglePages and GoogleDocs to develop e-portfolios in a Teacher Education Program: an example from Portugal

Clara Pereira Coutinho, João Batista Bottentuit Junior,
Instituto de Educação e Psicologia da Universidade do Minho – Braga – Portugal – ccoutinho@iep.uminho.pt-
jjbj@terra.com.br

Abstract: Web 2.0 technologies offer educators amazing opportunities for creating an effective and engaging learning environment for their students. In this paper, still in progress, we present how Web 2.0 tools can be successfully used for promoting collaboration and technological skills in teacher education programs. Participated in the study 24 teachers enrolled in a master program in education at the University of Minho, Braga, Portugal, in the 1st semester of 2007/2008. The experience involved the use of Web 2.0 tools – Googlepages and GoogleDocs – to build an e-portfolio for group work and assessment. In this paper we present the sites built by groups and discuss the adequacy of Web 2.0 tools for the development of e-portfolios for classwork and assessment.

1. INTRODUCTION

According to O’Reilly (2005), the term "Web 2.0" emerged in a conference brainstorming session between MediaLive International, Dale Dougherty and O’Reilly VP. O’Reilly considered then that the “Web 2.0 is the business revolution in the computer industry caused by the move to the internet as platform, and an attempt to understand the rules for success on that new platform. Chief among those rules is this: to build applications that harness network effects to get better the more people use them” (O’Reilly, 2006, online).

Web 1.0 applications typically consist of browsing and searching on the Internet, essentially a reading operation. In contrast, Web 2.0 applications, such as wikis, weblogs and podcasts, allow users to read and to write to the Web (Richardson, 2006). Building on the read/write applications that have emerged in rich, interactive, user-friendly application platform, Web 2.0 has essentially transformed the Web from a Web page publishing venue to a global network community where every user is invited to create content (Alexander, 2006; Anderson, 2007).

According to Yuen & Yuen (2008), today’s students are known as “digital natives” and are also known as members of the Millennial Generation. The digital natives are highly connected, increasing mobile, and technological savvy; and they see technology as an essential part of their lives. The “digital native” students have already found Web 2.0 tools integral to daily life. Prensky (2001, p. 1) pointed out from his article Digital Natives, Digital Immigrants, “Our students have changed radically. Today’s students are no longer the people our educational system was designed to teach.” Teachers should then consider moving teaching and learning away from conventional methods by which students are told what to learn, when, where, and how. Instead, knowledge should be actively constructed and students should be made responsible for their own learning. The opportunity for instant and global publication of information, thoughts, opinions, and ideas is something our “digital native” students take for granted as normal and commonplace (Prensky, 2004). The Web 2.0 applications hold profound potentials in education because of their open nature, ease of use and support for effective communication and knowledge sharing. They change the traditional view of human knowledge and open up more opportunities in teaching and learning. Teachers can use Web 2.0 tools attract students’ attention and enhance their learning experiences (Coutinho & Bottentuit Junior, 2007a, 2007b).

The paper we preset reports how in service teachers enrolled in a post graduate program in Educational Technology used Web 2.0 tools – GooglePages and GoogleDocs – to set up a digital portfolio for class work and assessment. The artifacts developed by teachers are presented and its potentials to enhance the construction e-portfolio for professional development is discussed.
2. E-PORTFOLIOS

Electronic Portfolios (e-Portfolio) are usually defined as “a tightly integrated collection of Web-based multimedia documents that includes curricular standards, course assignments, student artefacts in response to assignments, and reviewer feedback to the student's work.” (Gathercoal, Love, Bryde & McKeen, 2002, p. 30).

Electronic Portfolios and paper-based portfolios essentially complete the same task but in a different manner. However, electronic portfolios can be set up as a website and so are easier to change and maintain, can be given to a large audience, are more flexible than paper-based portfolios, and, in teacher education programs, provide a way for teachers to integrate technology into the classroom (Herring & Notar, 2007). Electronic portfolios are more flexible because new technologies allow the structure and layout of the document to be easily changed. They also create a sense of “interconnection” between work, which leads to a “richer understanding of themselves, and the standards against which they are being measured” (Norton-Meier, 2003, p. 517). Educators of all types are incorporating electronic portfolios into their classrooms and into their professional lives. They play an important part in helping educators use technology skills in ways that were not thought of before. It is in this way that electronic portfolios are changing the technology face of education (Barrett, 2002).

Google Pages and Google Docs were the Web 2.0 tool teachers used to build and maintain a website that functioned as the e-portfolios for group work and assessment. Google Page was used to create the web site and Google Docs for collaborative writing. In fact, collaborative writing tools as Google Docs are technologies that facilitate the editing and reviewing of a text document by multiple individuals either in real-time or asynchronously. Online, web-based collaborative writing tools offer great flexibility and usefulness in learning groups and educational settings as they provide an easy mean to generate text exercises, research reports and other writing assignments in a full collaborative fashion. Documents generated with such tools are always accessible to all the editors and can be easily downloaded and exported in standard word processing file formats.

3. METHOD
3.1 Participants

The project we present in this paper was developed in the first semester of 2007/08 (October thru February) and enrolled 24 in service teachers who attended a program on Research Methods in Education (RME). Our previous experience of teaching RME with postgraduate students who work and have difficulties to attend regular classes, suggested that much more could be done in order to prepare wiser technological efficient teachers for the fast-changing knowledge-based societies we live in. We believed that learning would occur through the exchange and sharing of information and opinions among a peer group in an online community and we used collaborative Web 2.0 tools in order to: a) introduce blended learning solutions in our face to face classes; b) to promote the development of technological skills in our in service teachers. Teacher education programs in Portugal often view technology as a subject to be added to the program rather than a tool to be integrated into the curriculum but we also know that for changes to occur teachers need to be introduced to new activities with technologies, then given time to practice and reflect about them (Coutinho, 2006; Gil, 2001; Paiva, 2002).

3.2 Procedures

The instructor presented the project, defined timing and forms of assessment but all other tasks were managed by students. The assignments were proposed when teachers were already familiarised with the syllabus of RME program. The idea was that teachers should work in teams and study in depth one of the research methodologies of the RME program upon a selected bibliography.

In the first class all participants were required to create an account in Google Site. Apart from the individual account on Google, each group also acceded to the Google Page Creator to create a web site that worked as the portfolio of the group over six months. In this webpage, in addition to elements of the personal identification of the elements of the group (picture, contacts, mini curriculum) should be added also all documents (text, images, references, sites) that the group considered relevant to sustain the contents of discipline, maps of concepts, sketches, thoughts, etc. The assignments should be organized by the groups in the classes and posted in the group portfolio.

Each group held its page on a personalized taking advantage of the features that the web 2.0 tool provides, which led to e-portfolio in very diverse formats. Available online, to access the portfolio of each group, the visitor of the site could monitor the development of activities and assignments done over the semester by each group of the class.

At the end of the semester, each group digital portfolio become a repository of information on a specific research methodology and contents of the subject of RME, that all colleagues could use consult and use for future research projects as the final dissertation to earn their master's degrees in Education. The instructor also had her personal website [ccoutinho.googlepages.com] and a site of the RME subject [mieuminho.googlepages.com], where
teachers could access links to the sites of the other groups, as well as to all information considered useful to help students in the early stages of development of the group work. The sites of each group were visited every week for assessment by the instructor who sent feedback and comments using the e-mail of the group, in order to improve the quality of the portfolio both in terms of usability and layout as well as in the trustworthiness of the contents available. The evaluation of the e-portfolios took into account pre-established criteria which focused on the quality and originality of the collection of artifacts available, as well as on the rigour of the academic writing produced (references, quotations, bibliography), important in the context of a curricular subject that prepares novice researchers in educational contexts.

3.3 Analysis of the e-Portfolios

As mentioned in the previous item, although the contents available on portfolios had been the central target of the evaluation process in the subject, the reality is that the groups developed portfolios very well prepared, with combinations of types of letters, sizes, colors and images as if can be observed in a simple visit to the addresses of the sites listed below:


On the home page of each group was made a brief introduction to the activity and were referred to the objective of the portfolio. One example is the introduction to the creative portfolio of the group FAADSAZE (which received this name by the union of the initial letters of each component of the group):

Under the Curricular Subject Research Methods in Education of the Master Degree in Educational Technology, we had the opportunity to work in group to develop class assignments and research projects. The group FAADSAZE, which is not a rock band garage, could give good concerts in the field of educational research, harmonizing their ideas, their knowledge and creating a dynamic collaborative workspace that was useful not only for the group knowledge construction, but also for sharing ideas with the class. [Http://faadsaze.googlepages.com/] (See Picture 1)

![Picture 1: Layout of the main page of the portfolio of the group FAADSAZE](image)

All of the assignments and exercises made during the semester could be accessed in the group portfolios for assessment. In Picture 2 we can see the example of the group “te.2007.08”
For class work and assessment teachers used other web tools, in particular the CmapTools software (cmap.ihmc.us) that allows to built conceptual maps for organization of contents; using this tool groups designed, collaboratively, maps of concepts on different RME topics, which were also available in the digital portfolio. (see example of a map on “Sampling Techniques” in picture 3)

Another technology that was used is Google Docs that allowed students to work on a collaborative way, from home, without having the need to hold meetings outside the classroom; through this tool the exercises were conducted online which were subsequently published in the site as another component of the portfolio of the team.

4. FINAL COMMENTS

The main objective of this paper was to present the Web 2.0 tools Google Page Creator and Google Docs and show their potential for the development of digital portfolios. The first and overall picture of the learning experience is very positive, because the in service teachers who attended a post graduate program in education, had the opportunity to develop skills as researchers in education, working, at the same time, with some of the Web 2.0 tools, and thus developing technological skills that are a basic requirement for teachers who want to use ICT skills and resources to improve their teaching, collaborate with colleagues, and become innovation leaders in their institutions. As Kathleen King argues (2002), teacher preparation and professional development is much more than technology training and must be seen as a starting point for educators' professional growth.
Web 2.0 tools are free and available, they have potential to enhance communication, collaboration and information sharing, so why not to use them for teaching and learning in teacher education programs? Not doing so would be a waste of time and opportunities. As teacher educators we believe that the key individual in helping students develop technological skills is the classroom teacher. The teacher is responsible for establishing the classroom environment and preparing the learning opportunities that facilitate students’ use of technology to learn, and communicate. Consequently, it is critical that all classroom teachers are prepared to provide their students with opportunities to work in teams, to collaborate with peers, to become capable information seekers, analyzers, evaluators, problem solvers and decision makers. As one can read in the portfolio of one of the groups, "to work in a team is one of the most appropriate methodologies for the construction of knowledge, for making learning more meaningful, more attractive and therefore more enduring and lasting."

5. REFERENCES


