The efficacy of eportfolios: an experiment with pupils and student teachers from Canada

Authors

Thierry Karsenti, Sophie Goyer, Stephane Villeneuve, University of Montreal, Canada; Carole Raby, University of Quebec, Canada

Abstract

Practical training is an important aspect of teacher education programs in Quebec (Canada) universities. Student teachers spend one hundred and twenty days of their four-year university program interning in high schools in order to progressively develop their professional skills.
Our changing society, increasingly dependent both socially and economically on information and communication technology (ICT), is generating new educational needs along with new teaching methods. New generations of students have fresh needs and expectations, which are particularly manifest in academic environments like universities. Nowadays, teacher training programs face ever-more challenges: the growing diversity of student profiles, the advent of new technologies, the multiplicity of university courses, and the lack of interest or motivation exhibited by preservice teachers with respect to the use of technology in the classroom. In connection with the ED-MEDIA 2007 Conference theme (information exchange on the research, development, and application of all aspects of Multimedia, Hypermedia and Telecommunications, including distance education), this presentation aims to (1) shed light on the development and features of an eportfolio system that would truly benefit everyone involved in education, from elementary school pupils to university professors; and (2) examine the eportfolio impact on Canadian student teachers and their pupils.

FROM PORTFOLIO TO EPORTFOLIO
Initially, the portfolio was not used in the education sciences, and even less so in teaching training. It was borrowed from the fields of architecture and the arts. For example, architects use portfolios to showcase their creations, abilities, and achievements. The portfolio was also used to trace the evolution of an artist's works and career.

The portfolio did not appear in educational circles until the late 1980s, when it surfaced in the works of Paulson and Paulson (1990). Traditionally, it was a way to present a variety of information describing an individual's education and achievements. Starting in the early 1990s, the electronic portfolio began to assume new forms: an educational newsletter, a collection of written works or projects accomplished, and so on. Lately, they have been put to a variety of new uses, including evaluation, accreditation, job search, skills certification, etc. The virtual encyclopedia Wikipedia reports that tens of millions of people—not just in the education field—use portfolios, and that in Great Britain alone, almost four million
people possess a portfolio attesting to their various talents or demonstrating their skills and accomplishments.

Towards the end of the twentieth century, with the phenomenal growth of the Internet and its online content, the portfolio was also marked by the information technology and communications era. From the portfolio sprang the eportfolio (electronic portfolio), which gained in popularity in educational circles. For instance, many school boards require their teachers to have a portfolio, and the same holds for a great number of primary and secondary schools. Similar initiatives have led the European community to seriously contemplate implementing a European portfolio for all students. In fact, the European Language Portfolio was developed and piloted by the Language Policy Division of the Council of Europe. It was launched on a pan-European level during the European Year of Languages as a tool to support the development of plurilingualism and pluriculturalism.2

DEVELOPMENT OF EDUPORTFOLIO
In an effort to promote the pedagogical use of ICT by primary and secondary school teachers and students, the team at the University of Montreal, Canada, created an electronic portfolio called Eduportfolio.org (or eportfolio), specifically aimed at the educational community, and more particularly, (a) teacher educators, (b) primary and secondary teachers, and (c) primary, secondary, university, and adult learners. The idea was to develop a user-friendly tool that would be embraced by the entire gamut of educational stakeholders, from university professors to preschool students.

To do so, a team of 50 teachers (primary, secondary, and university) and students worked intensively to design and develop a tool that would directly respond to the needs of the educational community. Of course, computer specialists (programmers, webmasters, and network specialists) contributed their valuable input, but the project was led by the teachers and students. Moreover, we must emphasize that some ICT-phobic teachers were included on the team so we could develop a tool that would appeal to the widest possible range of teachers, students, and educators. We should also clarify that the eduportfolio.org tool was designed to motivate teachers in training to incorporate ICT into their practice teaching.

EDUPORTFOLIO.ORG FEATURES

1 Note, for example, that the number of Internet surfers leaped from 16 million in 1996 to 700 million in 2006, and that over 9 million web pages are created every day.

2 The Europass Language Passport, an electronic version of the standard Language Passport for adults developed jointly by the Council of Europe and the European Union, may be filled out online or downloaded from the Europass site at: http://europass.cedefop.europa.eu/.
Launched in October 2007, Eduportfolio.org already counts 10,000 users in over 30 countries. Eduportfolio.org offers several benefits. First, it is extremely user-friendly, for young children and teachers alike. This aspect was central to its development, to ensure that "lack of time" would not head the list of reasons cited for the non-use of ICT. Our eportfolio uses electronic technology to warehouse a vast store of information (scanned documents, audio and video files, images and graphics, etc.). Eduportfolio.org manages a trove of text, audio and video files so that creative students and teachers can unleash their imaginations with no technological constraints.

It also includes several functionalities that actively promote the pedagogical integration of ICT into the classroom. For instance, with a few clicks, teachers can create portfolio sets for their students, and a Web page accesses all the students’ portfolios. Primary teachers working with very young students can even use an educator interface to correct the content of the students’ portfolios.

Note that the structure of eduportfolio.org is not rigid. On the contrary, it is very flexible and adaptable. Thus, students and teachers can create sections and subsections within their individual portfolios. This function would seem particularly useful, and it clearly sets Eduportfolio.org apart from other systems with less flexible structures, whereby students (and teachers) must fill out a number of sections that are not necessarily relevant to their subject or project.

Portfolio owners (students and teachers) can also publicize or password protect certain sections, or archive them to deny all access. Eduportfolio.org is interactive. This is another benefit that further demarcates it from similar tools. In effect, Visitors can enter their comments on the various portfolio items (comments can be in text, audio or video format). And with a simple click, a graphic-enhanced template may be selected. Since Eduportfolio targets both primary and secondary students and teachers (practicing and in training), the presentation models reflect this diversity. In addition, Eduportfolio includes high-tech functions like automatic RSS (Really Simple Syndication)\(^3\) integration, as used by the major online journal LeMonde.fr. It also includes a search engine so visitors can rapidly find the information they want. Finally, we should point out that eduportfolio.org is downloadable,\(^4\) so owners can present their portfolios without Internet access.

THE EPORTFOLIO IMPACT

---

\(^3\) See: [http://www.thierrykarsenti.ca](http://www.thierrykarsenti.ca) for a definition.

\(^4\) The entire portfolio may be downloaded and saved on a USB drive or CD-ROM.
Since its inception, we have been observing the impact of eportfolio on teachers in training. About 379 future primary and secondary school teachers have used it in their mandatory practical training (stage). At the same time, we wanted to better understand the impact of this tool on the students. We therefore pooled our efforts with a primary school principal, seven teachers, and their students (162 in all) to better comprehend the benefits of this tool.

Although the results of this preliminary experiment are still under analysis, it is noteworthy that a large majority of the future teachers that participated in the experiment found the tool “very user-friendly” (94.2 %), “closely related to day-to-day classroom activities” (83.5 %), and “greatly promotes reflection on learning activities carried out” (86.1 %) (by the future teachers themselves) during their practice teaching. Thus, eduportfolio.org appears to have a substantially positive impact on future teachers. Because the tool that we have developed has been proven both user-friendly and very relevant to the classroom activities of future teachers, we may surmise that teachers will gladly make use of it once they take up their posts. This remains to be verified, however. Aside from encouraging the pedagogical integration of ICT, eduportfolio.org also appears to promote reflection (see Schön, 1994), a required skill in teacher training.

As for the seven classes of students and their teachers, the impact was multiple. First, all the teachers adopted the tool for their own and their students’ use. Moreover, all the students managed to use the portfolio as part of diverse academic projects. Thus, within one month, seven teachers, only one of whom was a “computer geek” at the start, along with their 162 students, were inspired to use this academic tool to carry out a variety of different projects. These results, albeit preliminary, nevertheless indicate the vast potential for the electronic portfolio in an educational setting.

CONCLUSION
By developing an electronic portfolio jointly with a team of educators, teachers, students and teachers in training, we produced a tool that promises to be a contender in the difficult challenge of pedagogical ICT integration. Of course, we have not presented all the results from the implementation phase here. However, the conclusions obtained to date, along with the growing popularity of similar tools in the educational sector, gives us a glimmer of hope for the pedagogical integration of ICT into the classroom.

5 The project was presented to the supervisors of the teachers in training, who agreed to undertake the experiment in concert with the eportfolio development team, subject to the approval of the future teachers involved.