

The Student e-Portfolio 2.0: A blended Strategy for Improving Quality Learning and Teacher Professional Development

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Abstract

This paper depicts how a Student e-Portfolio 2.0 has improved the quality of learning towards the achievement of deeper and more autonomous learning behaviours. The implementation of this technological resource among students has also helped to redefine some strategic aspects for teacher professional development. It has brought to light key student needs closely connected with deep quality learning, such as interactive and cooperative work and a greater autonomy and mastery of learning processes.

Introduction

The technological resources available to students and teachers have been steadily progressing both in complexity and quality. Along with them emerges the concept of (Virtual) Personal Learning Environments (PLE). This concept is closely connected to the idea of the Student Portfolio as it focuses on a selective recording of learning evidence. For the purpose of this paper, we will look at virtual PLE as those virtual personal spaces that can enhance student learning by providing them with a significant degree of autonomy. According to Chatti (2009) this type of learning platform can integrate a variety of learning services, tools and devices that can be linked in interpersonal networks of knowledge.

Using learning platforms in higher-education faces three types of problems: Firstly, since they generally follow the very rules of computer engineering they tend to be more like a “toolbox” model rather than a learning environment. That is why many platforms cannot be strictly defined as high-quality virtual learning environments even when they incorporate Web 2.0 resources. Secondly, many teachers do not know how to bring their syllabuses into a virtual setting either because they had not previously integrated technology into their teaching practice, or because the size and conditions of their classrooms do not seem to allow for it. In such cases, ICT platforms—even the more sophisticated ones—only play a simple auxiliary role. Thirdly, teacher professional development is not always connected with the need to make technology work in the classroom.

The central feature of the Student Portfolio described here stems from a model for the analysis of the quality of teaching and learning in higher education, the ELQ/AQA08 model (Rué et al: 2010; 2013). According to this model, quality responds to the principle of situated

action, in which well-aligned functions exist within certain settings and contexts (Rué et al: 2010; 2012; 2013). This paper adopts the Student e-Portfolio 2.0 as a virtual tool that activates and facilitates learning processes, develops students' autonomy, and allows for the gathering of significant evidence based on classroom activities. Therefore, this platform must integrate the necessary Web 2.0 tools so as to encourage deep learning, both individually and in collaboration with others and the students' reflection of their own learning processes. It should also allow students to record, to regulate and assess the processes and outcomes of their individual and team work. Another interesting feature of the Student e-Portfolio 2.0 is that it does not rely on a specific platform. Any relatively complex ICT platform—Moodle, for example—can be used if the above criteria are met.

The virtual PLE mentioned above operates in a twofold way: it is a virtual workspace and a portfolio, allowing for the diachronic exhibition of the student's learning experiences and for the recording and storage of the most relevant evidence stemming from them. That is why our model has been named Student e-Portfolio 2.0. However, it is imperative to reflect on four key questions revolving around its implementation:

- What pedagogical discourse justifies its design and use?
- How does it facilitate higher quality learning?
- How is teacher professional development fostered?
- How can teacher professional training be delivered and improved in connection to the PLE/Student Portfolio model and the idea of higher quality learning?

Method

In order to collect evidence from the students' perceptions on the use of this platform, we conducted a survey that allowed for the analysis of ten basic issues. The amount of surveyed students was 492. In the end, the analysis was restricted to 298 students, as one of the teachers was involved in various subjects. Different ICT platforms were analysed (Moodle and Moodle plus Mahara), based on the orientations provided by the ELQ/AQA08 model and on the students' and teachers' needs (10 teachers from different disciplines and subject areas who were active participants in our project and whose considerations were prioritised). The survey revolved around ten issues that were considered basic to any platform and four big questions, around which evidence was collected:

- 1) To what extent do the proposed ICT platforms offer students the opportunity to:
 - reflect on their activities and achievements?
 - promote reflective thinking?
 - reflect on the variety, depth, and continued development of their knowledge and skills?
 - increase their self-confidence and help them identify those skills that need to be improved?
- 2) What basic features should a Student e-Portfolio 2.0 have so as to:
 - improve individual learning?
 - facilitate collaboration and cooperation among students?
 - provide greater autonomy and self-regulation?
- 3) What evidence does the use of this Student e-Portfolio 2.0 provide as far as increasing student collaboration and promoting the self-regulation of learning and performance in medium and large classrooms?
- 4) What are the most significant similarities and differences in the use of the Student e-Portfolio 2.0 in the various teaching approaches and courses examined here?

Findings

The shared experiences have led to the consideration of certain guidelines that may contribute to the improvement of teaching development, facilitating more appropriate and efficient methods and support in key aspects of learning. Moreover, it has been argued that the teachers who applied the Student e-Portfolio 2.0 would be more open to incorporating suggestions for improvement than if these were given in a more general and decontextualised way. Not only would this type of technological resource make teachers more able to understand, contextualize and analyze the important learning mechanisms involved in its implementation but it would increase their awareness about the difficulties—and rewards—concerning its design, technical management and performance improvement.

As regards data privacy, filing and accessing information, the assessment rate of the platform was 4.01 out of 6 (1=poor and 6=excellent) with an average deviation of 1.47. These results essentially reflect the functional differences between teachers using the platforms, based on their different competence level in the use of e-tools.

As to the learning opportunities provided by the Student e-Portfolio 2.0, Table 1 lists some of the results based on the students' opinions.

Table 1 Student's assessment of the key learning issues related with an e-portfolio.20

ITEMS	Mean Average	Learning conditions	Mean Average
Team Work	3,84	Social Interaction/ Cooperation	3,83
Sharing my work with others	3,82		
Filing and accessing information	4,15	Learning Autonomy	3,55
Individual work	3,78		
Feeling Autonomous	3,61		
Controlling the works to be handed in	3,55		
Incorporating supplementary materials	3,45		
Shared file access	3,44		
Self-assessment tools	3,28		
Working Tools	3,21	Self-regulation and Co-regulation	3,40
Timetable Control	3,42		
Feedback from Teacher	3,52		
Identifying individual and group skills	3,47		
External Control	3,41		
Facilitating Co-regulation	3,36	Metacognition	3,55
Comparing Portfolios	3,23		
Reflecting on learning processes and writing about it	4,00		
Being able to follow your own learning	3,46		
Thinking, re-thinking and writing about it	3,39		
Reflecting on the learning process	3,38		

Discussion

Based on the student assessment rates above, the following points of discussion are proposed:

- 1- To what extent each of the analysed indicators contributes to and enhances deep, quality learning?
- 2- Considering the more specific indicators, is there any potential room for improvement of learning relationships and learning outcomes?
- 3- How ICT platforms are adapted to become learning environments according to students' and teachers' needs.

Practical implications

The analysis of some of the indicators might provide interesting insights as far as improving teaching practice and the management of the student learning processes. This way, those in charge of providing assistance in training teachers for professional development would have valuable arguments for a very specific orientation of their activities in encouraging academic excellence and supporting faculty improvement. Moreover, the analysis of these indicators would also allow teachers and teacher trainers to strengthen their learning settings and functions, as well as the use of those technological resources that can enhance the design of their courses and learning outcomes.

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