Articles   School of Accounting, Economics, and Finance

2014

Enhancing Student's Learning with E-portfolios in Financial Disciplines.

Lucia Morales
Technological University Dublin, lucia.morales@tudublin.ie

Amparo Soler-Dominguez Dr.
Universitat Jaume I, Spain

Valentina Tarkovska
Technological University Dublin, valentina.tarkovska@tudublin.ie

Recommended Citation

INTEGRATION OF E-PORTFOLIOS IN FINANCIAL DISCIPLINES TO ENHANCE STUDENTS LEARNING

L. Morales[1], V. Tarkovska[1], A. Soler-Domínguez[2]

[1]Dublin Institute of Technology (IRELAND)
[2]Universitat Jaume I (SPAIN)
lucia.morales@dit.ie, valentina.tarkovska@dit.ie, amparo.soler@uji.es

Abstract

This study aims to identify how e-Portfolios can be integrated in Higher Education Institutions (HEIs) to promote a student-cantered learning approach on the Business programmes. The researchers have a vast experience dealing with financial subjects that are characterized by their level of difficulty, as technical knowledge is required to ensure that students are able to grasp basic concepts that allow getting a good understanding of the financial environment. Initial findings suggest that students have a strong desire to be more active in the classroom and that learning by doing approach appears to be more appropriate when dealing with technical modules. Consequently, the incorporation of technology in the classroom via the use of e-Portfolios could help in the transitioning process from a teacher-cantered pedagogy towards a classroom, where students take ownership of their own learning. Implementing e-Portfolios could help to develop students' self-discipline that is fundamental when dealing with complicated financial scenarios.

Keywords: Education practice Trends and Issues, e-Portfolio, Experiences in Undergraduate Education.

1   INTRODUCTION

The Educational System, in general, and the Higher Education Institutions (HEIs), in particular, are experiencing a profound process of change regarding the methodologies applied, which are progressively oriented towards a major students involvement in detriment of the traditional methods of teaching by following the standards laid down for the European Higher Education Area (EHEA). Technology has played a significant role in favouring the emergence of new methodological tools that promote a blended learning style and attribute a greater autonomy to students during their learning experience. Specifically, the e-Portfolio fits perfectly into the holistic perception of the learning process and it has been considered that it is an appropriate tool for constructing and managing students own knowledge. [1, 2] among others, argue that e-Portfolio contributes to enhancement of students' perception of learning and develops strategies, which contribute to students self-regulation. According to the definition of [3, p.64]: "Self-regulated learning is an active constructive process whereby learners set goals for their learning and monitor, regulate, and control their cognition, motivation, and behaviour, guided and constrained by their goals and the contextual features of the environment". Henceforth, self-regulated learning is promoted by the use of e-Portfolio, where students are challenged to take part in the knowledge-generating process.

Literature has broadly dealt with the potential applications this versatile tool offers for assessment purposes [4-6]. But in our conception, we stretch this perception by identifying the e-Portfolio as a resource, which is able to enhance learning process, as well as prepare students for their professional career endeavour. The use of e-Portfolio facilitates a virtual personal space of work and   allows participants to beneficiate from the working-on-line advantages and feedback. Moreover capabilities such as autonomy, self-management, creativity, etc. are developed as well as critical thinking emerged after conduction of reflection process. Existing research has devoted attention to this educational phenomenon by conducting descriptive studies among different subjects or levels at the same University or even comparing the impact in different Higher Educational Centres within the same country. However, few investigations have been undertaken considering two European countries. The scope of this comparative study tries to cover the existing gap and by devoting attention to the Business area, where the continuous constructive learning guided by the e-Portfolio should play a crucial role.

This study aims to explore the benefits and pitfalls arising after the implementation of the e-Portfolio in two transnational institutions: Dublin Institute of Technology (Ireland) and Universitat Jaume I (Spain) for undergraduate students. In both institutions, same usage and goals were established.   Study

conducted in both HEIs reaches a similar conclusion and attributes a great relevance for supporting and enhancing students learning experience to this virtual tool. However, it is found that the process of implementation must be completed in full in order to optimize the potentialities this tool has on offer. The initial stages of the process (introduction and development) are important for the overall success, and as soon as participants overcome difficulties at these early stages, they should feel encouraged and motivated towards learning more and more, the scope of knowledge will be consolidated and self-regulated skills will be developed, because students processed goals fully and successfully. Finally, students perceive the importance of connecting the contents, by amalgamation learning and assessment throughout the process with desired outcomes being achieved.

2   METHOLODOGY: DIRECT OBSERVATION

We follow [7] in our application of qualitative study to an educational technology framework, and use directed observation in this study. [8] Defines and extends a deep analysis of this technique and performs a descriptive approach by including alternative methods also related to qualitative research. The methodology we apply covers a descriptive study, which is focused on observing the method, and an impact of the implementation of the E-Portofolio. Specifically, with respect to the process of implementation of the object of study in both institutions, we perform the analysis of the impact achieved in a comparative way.

The approach followed by the two HEIs is quite similar in the use and understanding of the potentialities of the E-Portofolio. Level of implementation is quite similar due to the fact that University Jaume I uses the tool for the pilot project, and is still in the early phase of putting it into practice. DIT has introduced the e-Portofolio with instructors participating in this project for two years (2009/2010 and 2010/2011).

2.1   Sample

We considered all students, who voluntary agreed to participate in the implementation of E-Portfolio. However, our sample is limited because some students refuse to participate in the project and make any additional effort without being awarded bonus marks. This has been identified as a problem, which we will try to overcome in our future studies. Approximately one third of students have actively participated in this study and their reactions and results have motivated us to continue work. We are aware that the implementation is complex and our experience will help to improve it in the future.

2.2   Stages of implementation

In both HEIs we use Mahara software as an open e-portfolio source which is built in the Moodle platform. Both institutions incorporate this tool as complementary resource in the integrated Learning Management System, so-called Blackboad and Virtual Aula in Irish and Spanish Educational Virtual System Case respectively.

Before the implementation, it is fundamental to consider that it might be stressful for some students to face a new work artefact, and, as a result, it might be difficult to complete the objectives established in the course. Hence, it is very important that students will receive the constant support from the lecturer on the subject concern, and on the tool they need to be familiar. It is also important to provide a scheduled and detailed program of training sessions to students, and clearly explain the goals they need to complete. As this platform favours the non-contact work, it is important that the mentor also establish control and face-to-face feedback regularly through tutoring. In order to have an adequate supervision, it is important to consider the group size, with maximum 25 to 30 students. It could also be used in larger groups, but monitoring in larger groups implies a significant time investment.

Another issue, subject of controversy, is the appropriate score students should receive. Considering that participation in the E-Portfolio exercise represents a significant investment of time and effort, we propose that students who have achieved the objectives should get a significant mark to motivate them and encourage their involvement. However, it is a subject to the institution academic program.

After these key points are considered and the goals for the course clearly established, the moment for the implementation arrives. Fig. 1 shows our proposal regarding the stages that E-Portfolio should go through when it is implemented:
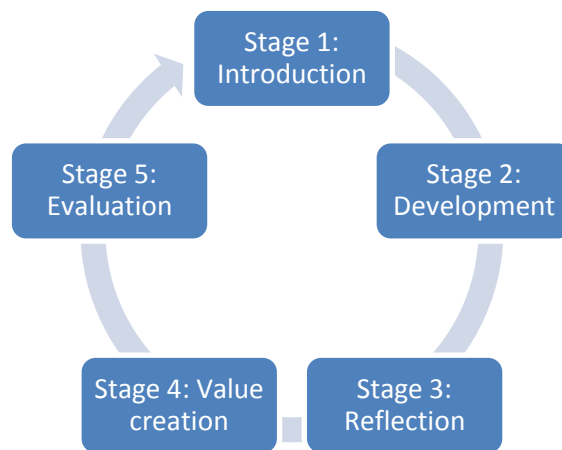
Fig. 1. E-Portfolio implementation stages (Own elaboration)

• Stage 1: Initial introduction

Participants must be aware of the importance of this critical stage. If the planning and goals are not clearly established it may cause failure or a lack of exploitation. Lectures need to become experts in the tool, being able to answer questions that arise and to facilitate the potentialities offered by the resort, in short, they must know how to sell the e-Portfolio to students and colleagues in order to extend its use and gain the expected benefits. With that purpose meetings must be held in order to standardize goals within the lecturers' participants and establish an appropriate schedule for achieving the aims. Also an incentive mark helps to motivate students to a greater degree, and we leave the lecturers to decide on an adequate compensation depending on the level of effort required.

This initial stage aim is to help students to discover the potentialities of the tool. E-Portfolio allows completing academic tasks, as well as includes different aspects of the students' life. Hence, it is good to encourage them to complete their personal data (CV, interests, etc.) in the way that they perceive this virtual space like their own, which allows participation in the process of learning. Support and feedback from mentor plays a key role in this early stage. It is appropriate to introduce students to the tool smoothly without pressuring on the goals; and when students feel attracted by the tool, they explore more and more while they are engaged. Straightforward activities are appropriate in this preliminary stage and the inter-connectivity benefits (not only between student-lecture but also among peer students). For example, by launching forums or by constructing a diary of the classes might be encouraging for the active participation.

• Stage 2: Full development

In accordance with the course goals, students are encouraged to implement the activities and additional course assignments by using the self-managed E-Portfolio. It is common at this stage to offer standard or extra activities to all students to gain extra marks. From our experience, there were participants who demanded greater partaking or produced additional work, but it is not the general trend. Eventually at this stage differences arise between the degree of students' motivation or the time they are willing to devote. Hence, it is imperative that mentor is able to offer support in order to help with queries and questions, because this stage is very important for completing the full cycle. Many students need extra time for a comfortable setting and the continuity of work depends on the supervision and feedback offered by lecturer. The leadership of the supervisor, as facilitator of the knowledge, must flow in a bidirectional way: on the one hand as facilitator of the course knowledge but also as facilitator in the use of the tool. Therefore, the role of the lecturers is fundamental at these initial stages, making the completion of the implementation process depending on an adequate introduction and a right development.

• Stage 3: Monitoring, reflection and feedback

Instructor's comments and guidelines are fundamental also at this stage. The importance of offering constructive and timely feedback to ensure that students are able to integrate all received comments on their work have become crucial to ensure that learners are able to develop their own skills. At this stage, it is also important that students realise the benefits of the regular engagement into the learning process by being involved in the continuous assessments and, at the same time, they are trained to reflect on their achievements and experience. Constant engagements, with assessments on a regular

basis, and a "habit" to write reflective comments are two important components which are necessary for the completion of E-Portfolio.

• Stage 4: Value creation and validity for future professional career

Once the student is capable to overcome the difficulties arising from the full implementation and work has been fulfilled, there is a limitless dimension, which brings students to their own life-long learning process. It is not only that knowledge is gradually consolidated, but students are aware that the contents and the overall learning experience have an application offstage the classroom, specifically in the financial environment. Then, they feel even more interested in delving into the content and feedback from the previous stages is naturally carried out. The enjoyment of learning is a sign of value added for the participants in the process; surely the contents learned will have a greater impact in time under a positive perception, but the utility of the information provided should have a major impact under the assumption that it would be valuable in the future (for professional development or employability, for example) and then E-Portfolio emerges like a sophisticated tool that conducts understanding of this style of learning.

• Stage 5: Evaluation and final discussion

This stage includes the final assessment process; students obtain the scores according to their development, in line with criteria established in the rubrics. It is also a moment for the E-Portfolio evaluation by students. They are encouraged to respond to a questionnaire by providing honest opinion about impression and concerns after their learning experience with this virtual resource. And finally, a debate among instructors' participants is conducted with the goal to assess the adequacy and response obtained from the students.

3   DISCUSSION AND EVALUATION

Regarding the assessment after the integrating the E-Portfolio in both institutions, and even that implementation has not been totally fulfilled, there is a general positive feed-back from the experience. As previously argued, this is an innovative tool that entailed difficulties that participants were initially unaware of. This view is shared by lecturers participating in the project and some effort has been made at the initial stages to get a major impact and motivation for all participants. It has been established that this project should continue over time, in order to optimize the investment of time and effort in the numerous activities carried out. Mainly for the students' case, it is important to note that participation was limited due to the voluntary nature of the activity or the low quotation of the associated marks. This has led us to reconsider another approach to participation for future, which we have suitably corrected by establishing evaluation criteria and teaching guides for the construction of rubrics, for example.

We strongly believe that this project represents the beginning of a powerful educational improvement not only for the benefit of the course involved. In the short term and with the continuous development of ICT these tools will lead to significant benefits. In all likelihood, the E-Portfolio will become an assessable part of the educational process, will lend itself to coordination between subjects, and will be a common denominator across all undergraduate studies. However, it is necessary to overcome the initial obstacle that a change always implies. We must be aware and reflect. The partial steps have been taken in developing this project and although we have not been able to achieve all the five stages, we expect that as a result of this effort full implementation will be able to take place in the short term.

Our contribution in terms of improvements is geared towards a wider dissemination and flexibility in the process of adaptation to change. It is important that within the European framework we are able to acquire new teaching skills oriented towards change and continuous improvement. If the E-Portfolio helps us to enhance the impact on the learning process, it is worthwhile for teachers and students to endeavour to standardize their use in support of improved teaching and to encourage reflective learning.

Positive results obtained from the students and instructors involved in this study lead us to validate the E-Portfolio as more than a development of a student-centred learning tool and encourage us to consider extending its use in later courses, including postgraduate students.

From our experience we identified potential strengths and weaknesses as follows:

3.1 Strengths (or Potentialities)

Firstly, we identified a general versatility of the resource, which let the users to adapt it for the educational purposes. Secondly, it is easy to use, as this resource is configured with a standard easy access, even for those unfamiliar with virtual environment, and it is also very intuitive. Thirdly, the attractiveness of the artefact has been also highlighted, allowing the users to include as many resources as they consider in an original manner. Fourthly, it represents an easily way to collect, organize and present information from a variety of sources, making it available to the teacher and students, and promoting a self-regulated learning. Fifthly, continuous assessment and feedback is promoted due to the availability of information and communication in real time or asynchronously (forums and chat conversations are included on the software). Finally, a personal space is facilitated where the user is able to include not only academic content, but also Curriculum vitae, interests or professional purposes, just to name a few, could be included in the sophisticated E-Portfolio where reflection and creation of value is conducted.

3.2 Weaknesses (or Pitfalls)

The suitability of the tool is called into question when considering big groups of students, with difficulties to carry out a proper monitoring and assessment. Also there is still some kind of scepticism about using e-Portfolio, specifically for Business Studies courses. It is still believed that the style of learning supported by virtual resources hardly contributes to the collaborative learning as most of activities must be carried out by each student, and the conservative thinking that face-to-face contact is much better for interacting is delaying the process. Finally, it is also criticized that students use to upload materials which are obtained from other virtual sources and then the reflection stage is not attributed with the importance it deserves, forgoing opportunities that the tool offers.

4 INITIAL RECOMMENDATIONS

After the experience of approaching the two initial stages of implementation of E-Portfolio, we can propose some recommendations to lecturers that will drive to a faster exploitation of the potentialities and a better use which the tool offers:

- Be involved as it is necessary to do an extra effort to familiarize and become an expert in a new tool. Some time is required and even technical training to meet the resource at depth.

- Be aware of the initial difficulties inherent to an initial change and be ready to overcome it.

- Be motivated and do not be discouraged if students do not respond as expected.

- Be optimistic and try to improve if problems are detected.

- Be clear and direct in what is expected from students.

- Be fair in attributing an adequate mark for the work required (use of rubrics).

- Be reasonable and balance the number of E-Portfolio participants according to the monitoring capabilities. It is not always possible to implement E-Portfolio in large groups of students.

5 CONCLUSION

This direct observation study explored how E-Portfolios can be used to support students learning experience where self-regulatory assessment should be encouraged to motivate and ensure that students are taking ownership of their own learning process and consequently their education. Main findings indicate that the E-Portfolio is a powerful tool supporting the learning process and helping students to become more disciplined and self-regulated learners. However, it is necessary to be aware of the importance of completing the five cited stages in order to exploit the full potentialities offered. This study highlights the importance of the initial stages (stages 1 and 2, introduction and development, respectively) as determinants of achieving the full implementation. The role of the instructor is fundamental to ensure that students are aware on the value of E-Portfolio and that guidance is required mainly during those first stages of the process, while students are able to adapt to the new tool. Once initial fears are eliminated, and students are able to develop their work, there are several dimensions capable to influence students learning (stages 3-5). The general benefit for

students is that they become more aware of their learning process while being independent and taking ownership of their work progress.

Acknowledgment

REFERENCES

[1] Meyer, E.; Abrami, P.; Wade, C.; Aslan, O. & Deault, L. (2010), 'Improving literacy and metacognition with electronic portfolios: Teaching and learning with ePEARL', *Computers & Education* 55(1), 84--91.Einstein, A. (1916). General Theory of Relativity. Annalen der Physik 49(7), pp. 769-822.

[2] Huang, J.; Yang, S.; Chiang, P. & Tzeng, L. (2012), 'Building an e-portfolio learning model: Goal orientation and metacognitive strategies', *Knowledge Management & E-Learning: An International Journal (KM&EL)* 4(1), 16--36.

[3] Pintrich, P. R. & Zusho, A. (2002) Student motivation and self-regulated learning in the college classroom, in: J. C. Smart & W.G. Tierney (Eds) Higher Education: handbook of theory and research (vol. XVII) (New York, Agathon Press).

[4] Mason, R.; Pegler, C. & Weller, M. (2004), 'E-portfolios: an assessment tool for online courses', *British Journal of Educational Technology* 35(6), 717--727.

[5] Klenowski, V.; Askew, S. & Carnell, E. (2006), 'Portfolios for learning, assessment and professional development in higher education', *Assessment & Evaluation in Higher Education* 31(3), 267--286.

[6] Heinrich, E.; Bhattacharya, M. & Rayudu, R. (2007), 'Preparation for lifelong learning using ePortfolios', *European Journal of Engineering Education* 32(6), 653--663.

[7] Higgins, N., & Rice, E. (1991). 'Teachers' perspectives on competency based testing'. *Educational Technology Research and Development*, 39(3), 59--69.

[8] Savenye, W. & Robinson, R. (1996), 'Qualitative research issues and methods: An introduction for educational technologists', Handbook of research for educational communications and technology, 1171--1195.