The Role of Eportfolios in Finance Studies: A Cross-Country Study

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Abstract

This study explores the use of ePortfolios as an efficient assessment tool to support students pursuing a Business degree, where Finance is a major component. We conducted an analysis on the role of ePortfolios in Higher Education at Dublin Institute of Technology (Republic of Ireland) and at Universitat Jaume I (Spain) for undergraduate studies. Our findings suggest that ePortfolios could be used to facilitate and enhance students self-regulated learning experiences where the role of the instructor is fundamental at early stages—to ensure that the learning process comply with basic academic standards—and diminishes as students become familiar with their course requirements, the ePortfolio's artefact's and the quality of work that is expected. Overall, students' judgment of the ePortfolio as a tool to complement their education was very positive as they found that their learning experience improved significantly and allowed them to benefit from breaks on their traditional learning approach. The initial evidence suggests that ePortfolios could be used to support technical and complex modules under a controlled environment that ensures that students do not lose focus from their core studies but simultaneously they are flexible enough to allow them to be creative and integrate their own ideas and views on their learning experience. This study allowed us to identify the need for further research looking to understand the characteristics and value of ePortfolios to support Finance Studies with the aim of enhancing assessment and learning strategies in Higher Education that foster student involvement in the learning process.

Keywords: e-content management and development, ePortfolios, trends, issues

1. Introduction

Nowadays Higher Education Institutions (HEIs) are immersed in a deep process of change with regard to learning and teaching methodologies applied in the classroom, which are gradually being oriented towards greater student involvement and away from traditional methods of teaching. The so-called student-centred teaching approach follows the standards laid down by the European Higher Education Area (EHEA). From this point of view, the lecturer and the student have exchanged places; under this new paradigm the lecturer is understood to be a mediator and facilitator of a more participatory, cooperative way of learning adapted to the diversity of the students' environment and the social context. On the other hand, the students' new role entails greater participation and involvement in the learning process. Students shift from being mere passive receivers in the teaching-learning process to active constructors of knowledge.

Information Technology (IT) evolution has played a significant role in this process of change, as it has favoured the emergence of new methodological tools that promote a blended learning style and give students greater autonomy during their learning experience. Specifically, ePortfolios seem to fit in well with the holistic perception of the learning process, and they have been considered an appropriate tool for constructing and managing students' own knowledge. Meyer, Abrami, Wade, Aslan, and Deault (2010) and Huang, Yang, Chiang, and Tzeng (2012) among others, argue that ePortfolios contribute to enhance students' perception of learning and they help to develop strategies that aim to promote students' self-regulation in the learning process. According to the definition by Pintrich and Zusho (2002), "Self-regulated learning is an active and 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" (Pintrich & Zusho, 2002, p. 64). In this context, the current paper aims to analyse and reflect on the use of ePortfolios to promote self-regulated learning in the classroom, and on how students might be challenged and motivated to

become active players in the knowledge generating process.

Current literature regarding the use of ePortfolios as an educational tool has emphasised its features as a powerful device to introduce dynamic forms of assessment into the student-centred classroom (e.g., Mason, Pegler, & Weller, 2004; Klenowski, Askew, & Carnell, 2006; Heinrich, Bhattacharya, & Rayudu, 2007). This paper considers ePortfolios as an additional resource available to HEI instructors working in financial disciplines. The main goal of this research is to explore ePortfolios' potentialities as an enhancer of the student learning experience, but also to examine their role in preparing students for their professional career. EPortfolios provide a virtual environment where students can learn and work at their convenience. Students can also benefit from the potential ePortfolios afford for autonomous work, self-management, creativity, and from the rapid and detailed feedback from their instructors and peers. It has been expected that implementation of this method have the potential to develop students' critical thinking skills as they communicate, interact and reflect on their learning. Lopez-Fernandez and Rodriguez-Illera (2009); Meyer, Abrami, Wade, and Scherzer (2011); Oliver and Whelan (2011); von Konsky and Oliver (2012), among others, have explored ePortfolios through descriptive studies focusing on different subjects and/or course levels. However, current research is limited in scope, as most studies centre on a particular learning institution, or are constrained to a national approach. To the best of our knowledge, there is a clear lack of inquiry exploring the role of the ePortfolio in business disciplines where finance subjects are a major component of the curriculum. We believe that we have identified a clear gap in the literature, which we attempt to close by adding evidence from a comparative study of two HEIs based in two European countries. This paper describes how the educational method was implemented to support undergraduate students in two institutions: Dublin Institute of Technology (Ireland) and the Universitat Jaume I (Spain) and presents the results of a questionnaire designed to gather participating students' assessments of the experience. Positive results from this study suggest the need for further research in other subjects, preferably from the same degree, in order to find synergies and to evaluate the impact of introducing new practices geared towards active learning.

2. Experience and Evaluation

Following Higgins and Rice (1991), we consider that qualitative research methodology supported by direct observation is the best approach to introduce our discussion on the qualities of e-Portfolios as a learning tool. Direct observation is a descriptive tool that allows researchers to gain an in-depth understanding of their subject of study (Savenye & Robinson, 1996). Our methodology consists of observing and analyzes students' responses on the level of agreement or disagreement after the use of e-Portfolios at DIT and Universitat Jaume I. Both institutions aim to better understand the "real" potential of e-Portfolios and how this tool can be used effectively and efficiently to support undergraduate students pursuing a business qualification.

The approach followed by the two HEIs is quite similar in the use and understanding of the potentialities of the e-Portfolio. The software selected for the use of e-Portfolios in both HEIs was Mahara. Both the institutions already use this software in their internal learning platforms, which allowed us to follow a consistent approach when presenting the tool to students and to gain a better understanding of the key issues that might affect the successful integration of the tool in the classrooms. Their level of implementation is also similar, since University Jaume I used the tool for the pilot project, and it is still in the early stage of putting it into practice. DIT has successfully introduced the e-Portfolio with instructors participating in this project for two years (2009/2010 and 2010/2011). However, Universitat Jaume I is still immersed in the process of transition towards the harmonized European model and the portfolio's previous experience was not as deep as desirable. This project was conceived through a mobility research programme where the authors put in common goals to enhance teaching process while pooling experiences. Thus, the cooperation vocation was inspired and we both Institutions agreed to implement a common pattern in the use of the ePortfolio once we designed the stages and full implementation for the academic year 2012/2013. The study took place in the first semester of this period and the following experience is extracted from the Universitat Jaume I since DIT results from the implementation are extrapolated.

2.1 Sample, Description and Goals

The research sample spanned one academic year (2012/2013), and involved 46 students (distributed into two practice subgroups) who voluntarily agreed to use e-Portfolios. We are aware of the limitations of our research sample and the implications with regard to generalisation of results. However, as this is an exploratory study we consider that our findings are relevant as they help us to gain a better understanding of the importance of implementing and integrating e-Portfolios in the classroom. Conveniently, the course follows the traditional Problem Based Learning (PBL) approach, adding up the adequate use of the ePortfolio device for covering goals established for the practice sessions. The sample considered in the present study consisted of 21 questionnaires,

fully completed by students. Other questionnaires were rejected as they were incomplete, or respondents did not give their consent to participate in this project for the academic year 2012/2013. The study took place in the first semester of this period.

A total of 21 students completed the questionnaire after they experience of usage and exploitation. Although we are aware that the sample is small in comparison to the number of students enrolled in the course, we consider that it is sufficient and representative for the purposes of monitoring the impact on students' satisfaction and engagement, since the average number of participants attending the practical group sessions was between 22 and 24 students per class. Solving problems and short exercises are compulsory in the second course of the undergraduate Finance and Accounting Programme. Participation in such activities is evaluated and a percentage of the total mark (or qualification) depends on participation and the quality of the activities carried out. Students are required to undertake both individual activities at home and also in the classroom. The activities designed to be solved in the classroom were quite similar to the ones solved at home.

After the initial approach to the virtual tool, students were call to develop and follow an active participation enrolling the ePortfolio practice. Beyond the solving problem procedure, the main point of this student-centred method is the reflection process which reinforces the learning and consolidation of the contents. There are three keys articulating the process of reflection and all students are called to identify in each issue dealt: i) new contents, ii) the most important and, finally, iii) weaknesses or critical points. This reflection exercise helps students to review and assimilate the contents while reinforces and strengthens learning. Monitoring and feedback from instructor are crucial as their comments and guidelines to ensure that learners develop their skills and achieve the benefits from continuous assessment (see Figure 1 below)

Once the student has overcome any difficulties encountered during full implementation and s/he is successfully completing course assignments, the potential of the e-Portfolio is boundless, and leads students into their own life-long learning process. At this stage knowledge is gradually becoming consolidated and students are more aware of their overall learning experience and how they are able to blend their learning tool with their course content. As a result, students are even more interested in mining the content and the feedback from the previous stages, and the whole process becomes quite natural. Enjoyment of learning is a sign of value added for the participants as they have a more positive perception of the potential of e-Portfolios to support their studies. The utility of the information provided during their course should have a major impact, as they recognise its future value (for professional development or employability, for example) and thus, the e-Portfolio emerges as a sophisticated tool that drives understanding of this learning style.
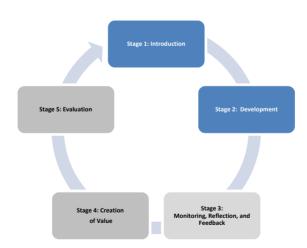

Figure 1. EPortfolio implementation (Source: the authors)

Evaluation includes the final assessment process; students are marked in line with criteria established in the course rubric. It is also a moment for students to reflect and self-evaluate. Students should be encouraged to interact with their instructor and clarify any doubts that they might have related to their marks. Finally, the process should encourage debate among the instructors who have used the ePortfolios as part of their courses, providing a space to share their own experiences and receive feedback that allows them to reflect on course outcomes. This feedback phase should help instructors consolidate their skills and identify areas that require

improvements and further development. The next section describes the evaluation that instructors wishing to use ePortfolios might consider as a guide from experience.

The broad goal of the ePortfolio implementation in the learning practice is to facilitate students a resource able to help them to acquire and consolidate not only content, but also transversal skills, all of which are complemented by self-study. It is very important to motivate students and encourage them to participate in such virtual environment. In order to adequately reward this effort the lecturer must specify the mark through the rubric. As these activities are carried out during the course, students should also be given a guide or plan covering the objectives, instructions and schedule. The clearer the instructions are, the more successful the experience will be. In the initial stage it is important to recognise that the experiment's success depends on keeping students engaged and lecturers must be aware that some students are initially reticent to any methodological change. The lecturer's efforts in presenting and "selling" the experience are therefore vital. The greater the initial involvement, the more students will benefit from the experience.

This opportunity has taught us how students felt about this new methodology and whether the expected learning objectives were achieved. We believe that in the short term and with the continuous development of Information and Communication Technologies (ICT) these tools will lead to significant benefits for student-centred learning approaches. The use of e-Portfolios might simplify the educational process, as it can help to coordinate undergraduate studies.

2.2 Evaluation of Results

Universitat Jaume I is still immersed in the process of transition towards the harmonised European model for four-year undergraduate studies. Given that this study was designed and run for the first time—this was the second academic year that this course had been taught—and that average attendance in practical classes was ninety percent, the lecturers involved were very satisfied. Although the number of students attending practical classes was not very high in comparison to the overall number of students enrolled in the course, the questionnaire results reveal that the ePortfolio had a very positive impact for students.

The design of the research was quasi-experimental since the research was implemented in authentic class settings. Students' responses were scored according to a questionnaire measuring degree of agreement or disagreement, as reported in Table 1.

Table 1. Student level of agreement or disagreement

1	2	3	4	5
Strongly disagree	Disagree	Agree	Somewhat agree	Strongly agree

Nevertheless, one limitation is recognised in the current study. This limitation refers to the level of agreement nomenclature, as we consider level 3 as "agree" and it is commonly used in some dispositions of standard surveys, medium level or statement number 3 referring to "neither agree nor disagree". The purpose of our choice is to avoid the gap when students show some kind of indecision or laziness to face some uncomfortable questions.

After deciding on the questions, the following questionnaire was drawn up. Due to space restrictions, we are not presenting here the entire questionnaire, but the structure articulated in three sections deserves a special mention, distributing questions by following the subsequent scheme:

- Section A: Technical aspects and previous experience (questions 1 to 5)
- Section B: Assessment from learning perspective (questions 6 to 10)
- Section C: Reflection process (questions 11 to 13)

We finally add two final opened questions: the prior one for identifying debilities, threats, opportunities and strengths and the latter for comments and final evaluations where students are able to refine any aspects they considered relevant and that have not been previously cited in the questionnaire and from their experience.

Students were invited to complete the questionnaire after the final practical session. Participants were mainly female (66.66%) and between age of 19-22 (80%). Table 2 presents the questions and percentage values of the results.

Table 2. Results (in percentages) obtained from the students' questionnaires

		Agreement level (in percentages)				
Question		1	2	3	4	5
1	Initial guidance and explanation of the ePortfolio is important in approaching the tool and the potentialities in usage it offers	0.00	9.52	14.29	33.33	42.86
2	The ePortfolio is easy to use once it has been explained	0.00	9.52	14.29	33.33	42.86
3	Content presentation and possibilities offered are adequate	4.76	4.76	38.10	47.62	0.00
4	You have previous experience of using Web 2.0 tools for learning purposes	66.67	23.81	9.52	0.00	0.00
5	The initial support and continuous assessment from the lecturer in the early and development stages is positive	0.00	0.00	23.81	14.29	61.90
6	This methodology helps you to enhance your autonomy	0.00	14.29	38.10	33.33	14.29
7	Working time to perform and follow your ePortfolio involves a higher work load than other subjects	19.05	57.14	19.05	0.00	4.76
8	Lecturer maintains continuous feedback	0.00	0.00	33.33	42.86	23.81
9	Evaluation system and assessment marks encourage you to make a greater effort	0.00	0.00	38.10	38.10	23.81
10	The ePorfolio is useful as a learning resource	4.76	14.29	28.57	33.33	19.05
11	Using the ePortfolio helps you organize your material and ideas better and reinforces your learning process	4.76	14.29	28.57	38.10	14.29
12	Time invested in carrying out the ePortfolio is sufficient and allows you a deep reflection on learning	0.00	0.00	47.62	42.86	9.52
13	You would like to see the ePortfolio approach introduced into other subjects in the near future	9.52	14.29	23.81	42.86	9.52

The results show that most favourable responses (degrees of agreement four and five, somewhat agree and strongly agree) exceeded the sum total of agreement levels for values one to three (strongly disagree, somewhat disagree, agree). Responses to most of the questions reflected a positive level of agreement. Specifically, questions 1, 2 and 3 obtained values of over 76% in the two maximum satisfaction levels 4 and 5, and for questions 10, 13, 14 and 17 the agreement level accounted for 100% of the responses (including agreement level from three to five). The highest levels of agreement were therefore found with "they find positive the initial support and continuous assessment from lecturer at early and development" (issue 5), also "initial guidance and explanation of the ePortfolio is important for approaching the tool and the potentialities in usage" (issue 1) and "the ePortfolio is easy to use once it has been explained" (issue 2). The significance of these results clearly justifies their being taken into account in similar forthcoming teaching experiences.

On the other hand, a number of issues were unresolved, such as that raised by issue 7, where the high number of "strongly disagree" responses in comparison with the "agree" responses suggests that students may not yet perceive certain new methodologies and the time invested in performing as part of their learning in the course. This may be because they are not familiar with these techniques and some of them are reticent to changes, which are certainly always perceived as considerable. Their answers reflect a lack of clear perception on whether this methodology successfully complemented the course. Perhaps the meaning of this question was unclear o they feel frustrated because of the additional effort, and as a result they selected "agree" to punish the study while "strongly disagree" and "somewhat disagree" amend the gap with 19.05% and 57.14% of the students reject the claim that working time in performing and following your ePortfolio imply a major hard working than other subjects.

Finally we analyse the issues that received less favourable responses or, in other words, those that students penalised in their assessments. Issue 4, which asked whether students' previous experience in using Web 2.0 tools for learning purposes. Almost 90.5% admit the lack of background and that fact open for us a new scenario where the more difficult step has been overcame. This controversial issue does not detract from the overall

context since the scores for other issues present a clear advantage, as indicated by students who attributed a positive value as it helps them to enhance their autonomy, lecturer feedback is gaining value, they felt motivated and they agreed that this method reinforces their learning, finally students would like to continuing with the implementation to other subjects for future.

Taken as a whole, the results reflect diversity in level of agreement among the students, but in general, the assessment is positive. Figure 2 shows the results at a glance in a bar chart.
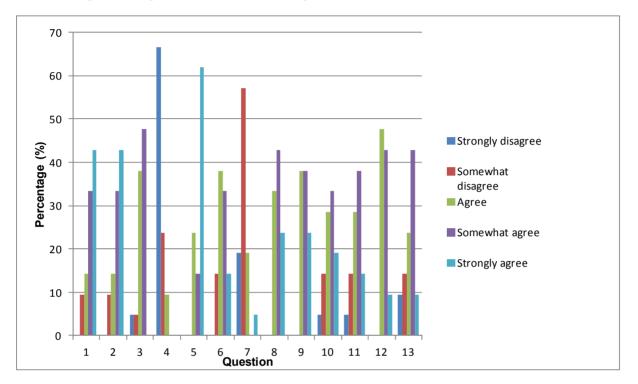

Figure 2. Results (in percentages) obtained from the students' questionnaires

Further analysis highlights the answers lying in the upper and lower limits; figure 2 clearly identifies that responses where the number of "somewhat disagree" and "strongly agree" achieved the same percentage, issues 6, both total 14.29%, (also seen in Table 2). This observation leads us to reflect on the issues that were either not made clear enough, causing students to doubt, or simply be reluctant to answer properly. This bias should be corrected for future experiences and questionnaires should avoid any questions that may be considered ambiguous, thus leading to cross posting responses.

Finally, the issues that obtained no "strongly disagree" or "somewhat disagree" assessments, the case of issues 5, 8, 9 and 12, are particularly significant. We can conclude that all students found positive the initial support and continuous assessment from lecturer at early and development stages, they agree the important role on the lecturer continuous feedback, the evaluation system and assessment marks engage them towards the dedication of a major effort and finally, they consider that the time invested in perform their ePortfolio is enough and they deepen in the reflection stage on learning.

3. Conclusion

The aim of this study is to investigate the ePortfolio implementation in the learning practice by facilitating students a resource able to help them to acquire and consolidate not only the course content, but also transversal skills, all of which are complemented by self-study. The role of ePortfolios in Higher Education is analyzed at Dublin Institute of Technology (Republic of Ireland) and at Universitat Jaume I (Spain) for undergraduate studies. This direct observation study explored how e-Portfolios can be used to support students' learning experiences where self-regulatory assessment should be encouraged to motivate and ensure that students are taking ownership of their own learning process and consequently on their education.

The impact achieved by the practice was measured using a questionnaire to gauge students' level of agreement. Our main findings indicate that the use of e-Portfolios in the classroom helps students to become more

disciplined and self-regulated learners as this methodology helps students to enhance their autonomy. Our findings also suggest that the implementation stage is crucial to optimising the benefits that this tool can offer to instructors and students alike and it is very important the initial guidance as the resource becomes easier after the initial explanation.

The initial stages of the process (introduction and development) are fundamental for the overall success of courses run with e-Portfolio support. Once participants overcome difficulties at these early stages, they tend to gain confidence, they feel encouraged and motivated towards their own learning and they feel more in control over their own education. We also found that the role of the instructor is crucial to ensuring awareness among students of the value of the e-Portfolio and in offering guidance to students at very early stages, enabling students to adapt to the new tool. Once initial fears are dispelled, and students can engage in their coursework, several dimensions can influence students' learning (stages 3-5). The general benefit for students is that they become more aware of their learning processes while remaining independent and taking ownership of the progress of their work. It is our view that e-Portfolios can add value to Business Studies and that further research is needed in this area.

In general, students reported a very positive impact and the resource appears to be highly suitable for use in future learning experiences. Our experiences tell us that each instructor will need to use the tool, identify his/her group needs and proceed to adjust the marking process in accordance with the course demands and students' involvement in their learning.

Acknowledgments

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