

## Using ePortfolios to Encourage Responsible Feedback

Lucia Morales <sup>a, \*</sup> and Amparo Soler-Dominguez <sup>b</sup>

<sup>a</sup> Department of Accounting and Finance, Dublin Institute of Technology, Ireland

<sup>b</sup> Departament de Finances i Comptabilitat, Universitat Jaume I, Spain

**Submitted:** May 6, 2015 | **Peer-reviewed:** August 4, 2015 | **Editor-reviewed:** September 7, 2015

**Accepted:** September 23, 2015 | **Published:** September 30, 2015

**Abstract:** This article aims to look at the value that ePortfolios can add to business studies, specifically in the financial field. In order to answer the question, *Do ePortfolios contribute to the development and enhancement of responsible feedback in the classroom?*, the study analyzed the work done by postgraduate students pursuing a Master's degree in finance. A total of 151 ePortfolios were reviewed and analyzed, and a selection of comments from students is presented in order to support the main findings of the literature review. The authors considered this approach to be appropriate in order to offer an objective analysis on existing research and how their own students' views blend with developed literature in the area. The authors also offer their own know-how on how ePortfolios can be integrated as part of the postgraduate learning experience. The researchers identified ePortfolios as being a complementary tool that help educators and students to get a better understanding of the course material and offer students an opportunity to reflect on their own learning and course performance. They also identified a lack of research on how ePortfolios can be used as part of the students learning experience in postgraduate education specialised in finance.

**Keywords:** student feedback, responsible feedback, ePortfolios, student-centred-approach

### Introduction

Lam (2010) offered an analysis that connects portfolio assessment with self-regulated learning and student engagement with coursework, as students are able to record, review, interact, reflect, and archive their accomplishments throughout the academic year. Students' work and efforts are properly recorded over a determined period of time aiding them to demonstrate to their educators, peers, and interested parties how they have progressed in their course-learning agenda. The development of ePortfolios allows students to take responsibility on issues that are relevant to them and connected to their course curriculum. At the same time, being responsible for the development of an ePortfolio promotes the identification of information that should be presented and highlighted to their educators. It also helps students to recognize those areas of knowledge that define their own identity and uniqueness and that would help them progressing with their learning. In this way, students are able to self-regulate their learning and educators are able to gather sufficient evidence to support their continuous assessment of students' work and

---

\*Corresponding author (lucia.morales@my.ohecampus.com)

their individual reflections on their own progress. Therefore, ePortfolios can help educators to review the work done by their students at the time that facilitates the delivery of appropriate and relevant feedback. Educators are able to deal with those aspects of the work presented that require further elaboration and offer personalized support and coaching to their students to help them in the process.

Self-regulated learning encourages a student-centered approach, as it focuses on the learner's capacity and abilities to monitor his/her own knowledge, gained skills, and overall progress. In addition, a self-regulated learning approach facilitates the identification of those strategies that would assist students accomplishing self-directed learning goals (Nicol & Macfarlane-Dick, 2006). In this paper, the authors consider the specific use of ePortfolios to support Business students and to help them accomplishing their learning objectives through a twofold approach: i) students are able to take responsibility for their own learning through a self-regulated approach, ii) and technology is integrated on the learning and teaching routine that facilitates recording and updating course work, as per requirements and identified needs.

With the aim of looking at the value that ePortfolios can add to learning disciplines, the authors focused their attention on business studies with a specialization in the financial field. The study analysed the work done by postgraduate students pursuing a Master's degree in Finance at a technology oriented higher education in Ireland. The Master programme was selected to support this study, as ePortfolios have been used as a complementary way of assessment in this course to support students learning since 2008. A total of 151 ePortfolios were reviewed and analysed, and a selection of comments from students are presented throughout this paper with the aim of supporting the literature review main findings and to integrate the authors' own know-how on how ePortfolios can be integrated as part of the postgraduate learning experience.

Through the next sections of this paper, the authors offer a critical analysis and discussion of existing research looking at ePortfolios, incorporating and assessing their own practice on the use of ePortfolios. The authors of this study support their research findings with their own students' views, experiences, and reflections as per the original records in their ePortfolios to keep fidelity of their students' work. The authors considered this approach to be appropriate, as it helps to offer an objective analysis on existing research and how their own students' views blend with developed literature in the area. In addition, the authors have identified a lack of research on how ePortfolios can be used as part of the students learning experience in postgraduate education specialised in finance and this paper offers a clear contribution to the field.

### **Research Aims and Objectives**

This study elaborates on the existence of a bidirectional connection between responsible feedback and its role in the learning process. Students and educators alike need to be able to offer responsible feedback to each other on the work that is done in the classroom. Feedback is a core component of classrooms activities, as it allows adequate assessments of the work done by students and help educators identifying those areas that require further attention, mentoring, and extra support. Students should be able to transmit their learning achievements and accomplishments, but at the same time they need to be able to convey their views and perceptions through constructive feedback to their educators. Concurrently, educators should be able to pick up on relevant points and comments offered by their students regarding class work and activities that require improvements, extra coaching and further development.

Traditionally, feedback in the educational context could be understood as being unidirectional—from educators to students. However, the authors think that feedback should be

taken according to its bidirectional nature, as students are also able to provide constructive criticism to their educators on those aspects of their courses that are not working for them and that require consideration. This study looks into the bidirectional nature of responsible feedback and how ePortfolios contribute to enhance the learning process and foster the implementation of learning and teaching structures that are student-centered and supported by bidirectional responsible feedback.

### **Research Questions**

In this study, the main focus of interest is the analysis and examination of the efficient use of ePortfolios in postgraduate studies in the field of finance. The authors consider that the financial discipline is a complex one, characterised by a major emphasis on the acquisition of technical knowledge and skills. Furthermore, future professionals need to be ready to react and interact within a very dynamic environment, which means they should be able to manage a variety of activities in their work environment. In addition, the development of communication and writing skills are essential to ensure that financial professionals are able to communicate their ideas, appraisals, and estimations in a clear and effective manner. Nevertheless, these latter skills might not be at the center of attention on current postgraduate programmes in the financial field, and assessment tools that look to promote the development of these talents are needed.

The authors of this paper argue that students should be able to combine technical and complex knowledge. A set of skills that should be enriched with reflection, criticism, and quality analysis, core talents that would complement their financial education and would help them to become high-qualified and competent professionals. Fittingly, the authors analyse how ePortfolios can be used in postgraduate education in the field of finance to ensure that students become self-reflective practitioners and that they take responsibility of their own learning through a self-regulated approach, at the time that they become effective communicators. Therefore, an initial question that we would be addressing in this study is outlined as follows: *Do ePortfolios contribute to the development and enhancement of responsible feedback in the classroom?*

The main area of concern in this study is to identify how ePortfolios can be used in the classroom to help students taking ownership of their own learning and offering objective views on the work that they have done. The study provides evidence of reflections, thoughts, and views shared by students in their ePortfolios, which helped understanding how they considered the course activities that they were required to complete and how they identified areas of concern and issues that required their educator and their own attention.

A subresearch question looking at the review and reflection process through ePortfolios is also considered relevant to this study: *Do ePortfolios enable students to review and reflect of their course work?* This question aims to support the leading research question, allowing the researchers to look at students' reflections and how they reviewed the work that was completed, and in particular how they felt after the whole activity was finalised. Being able to look into students' reflections and views on their course work provides valuable feedback to educators, as they are able to reconsider their course assignments, class dynamics and the whole interaction process between them and their students. Students' views and reflections facilitate proper review and update of course curriculums to ensure that students' needs are covered and contribute to a successful learning experience to future students.

### **Validity of ePortfolios**

The use of ePortfolios within the classroom provides an opportunity for students and

educators to document, review, and assess the work that they have done through the module and year of study (Wickersham & Chambers, 2006). The authors consider that, in order to support students and make ePortfolios an efficient learning tool, they should be integrated as an additional form of assessment that allows for self-reflection on the individual components of the course work. ePortfolios help students to look into all the work that they have done and encourage them to express and voice their own views and opinions (Blackburn & Hackle, 2006). In this way, ePortfolios help students to think and reflect on those aspects of their course that they consider relevant and at the same time they are able to offer constructive criticism on those features that are not clear or well developed and that require their educators' attention (see Yusuf and Tuisawau, 2011). The reflective and revising nature of ePortfolios reinforces student responsibility on their own learning and equip them with relevant tools and skills that facilitate the communication between them and their educator (Wickersham & Chambers, 2006).

ePortfolios offer valuable opportunities to students since they facilitate reflection in the classroom (Roberts & Maor, 2012) and provide an environment where students are free to review and reconsider the work they have done, and where they can express and channel their own views and opinions on the quality of their work. After all, "[t]he most effective and successful ePortfolio programs provide formative feedback throughout the ePortfolio development period, encouraging reflection and subsequent revision and refinement of the evidence" (Ring & Ramirez, 2012, p. 89). Students are able to reconsider those areas that required attention and in which way their educator can offer further support to help them improving and enhancing their own skills.

It is evident that a traditional assessment based on a final exam would not offer enough time and room to students to think about the work that they have done during the academic year, and to convey their thoughts, experiences and views. As a supporting example, the authors consider appropriate to quote some views offered by some of their students using ePortfolios to support their learning experience. Student A indicated that *"The ePortfolio is my electronic diary. Each week I am going to provide information on how my whole experience within the module"*. The student was able to consider his/her work on a weekly basis and s/he was able to reflect on the activities that have been completed and offer comments and views on received grades and feedback. This exercise allows the student reviewing the work that has been done, and at the same time s/he was able to offer feedback on the course work to his/her educator. As an example of bidirectional feedback, another student noted:

*I was extremely happy with the way this assignment panned even though like I said it was extremely difficult. I felt I played a vital role in creating the document. If I were to be able to do the project again I personally would try to research a little more in regards to the methodology. Furthermore, I would like to have been a little more involved in the literature review. As the project was split up I didn't have the opportunity to do as much research in regards to the literature review as I would have liked. (Student B)*

This comment offers well-defined feedback to the educator, indicating that group work was appropriate, that the level of difficulty of the assignment was manageable by the students, but that some improvements were required with regard to work distribution to ensure that students were able to work on every aspect of the assigned group project and the potential of division of activities is minimised. At the same time, the student offered a valuable assessment of his/her own work and how s/he contributed to the completion of the assignment. In this regard, when reviewing the group project, the educator was able to consider the quality of the overall assignment, identify students' contributions, and also take into consideration the views and comments that each one of the members of the team provided with regard to group work dynamics.

Another comment that further highlights the validity of eportfolios to provide constructive views to the educator states the following:

*I felt the software based assignments were excellent practice for our practical exam and certainly will come in useful for my thesis as I will be running tests in relation to EMH and therefore found the e-tivities very worthwhile. Only 10% of the overall mark was allocated to the e-views assignments. This is a small amount of the overall mark as these assignments took a considerable amount of time to complete but as mentioned already they will be beneficial to my further study. (Student C)*

As seen, it is possible to identify how the student considered the given assignments to be adequate to support his/her learning, but at the same time the marks allocated considering the amount of work and dedication was not satisfactory. This is an interesting comment that was considered by the educator with the aim of looking at the associated workload with the assignment and assessing if an upgrade was required.

### **Reliability of ePortfolios**

The reliability of student learning and achievement in higher education is traditionally linked to the final score achieved in a final test/exam, where the student work over the year might not be fully considered due to different circumstances. Usually, tests are associated with situations of stress, worry and anxiety and they might not allow some students to perform to the best of their abilities, and to demonstrate the knowledge and skills that they have acquired during the completion of their course (see Putwain & Daly, 2013).

The construction of an ePortfolio—over the course of study—that is well defined, composed, and aligned to the course rubrics, aims, and objectives can help to control and monitor the ePortfolio content (Weigle, 2002). In addition, the use of the ePortfolio, as a complementary mode of assessment, allows for the holistic integration of a variety of forms of assessment so that the educator can get a better representation of the quality of the work done by the students. It also offers a fairer way of assessment that takes into consideration the qualities and abilities of each student at the same time it removes the stress and anxiety associated with a final exam/test. This is exemplified in the following comment, from one of the students completing his/her ePortfolio as part of his/her course work:

*I enjoyed working with my group and felt we all worked well together and every member brought a unique skill that they brought to the table. I really enjoyed the Econometrics lectures and have learned a lot from this module. I am proud of the work I have completed to date in group assignments, presentations, individual assignments etc. and the standard of work I have delivered. I am no doubt that what I have learned in this module both from a theoretical and practical point of view will be beneficial to me once I finish this Finance Masters. (Student D)*

This comment portrays how the student valued positively the integration of different assignments in his/her course, that allowed him/her being exposed to different type of scenarios and tasks that complemented his/her learning experience. Another comment of interest that is more specific to the role of exams can be found in the next comment from another student:

*Time was the issue with the exam. The week before I had run through all the tests twice, from start to finish, using different data sets. I was really glad I did this, as I didn't have to think about the actual running of the tests (the mechanics), rather just the analysis and*

*interpretation. I still had to work right up to the end. I can see the benefit of the e-tivity assignments in relation to the exam. The e-tivities build up knowledge and develop skills that are required for the lab exam. The exam would have been extremely difficult had I not had the e-tivities beforehand. (Student E)*

Here, the student has offered an interesting view with regard to the exam that s/he had to complete and how time was an issue when trying to address the tasks that were presented to him/her. Another student offered a noteworthy comment with regard to the exam:

*Lab exam was a great revision of the techniques we learnt throughout the second semester. It gave us the opportunity to test our abilities and application of the skills, and understanding how and when certain techniques are used. I found not enough time to complete the exam as well as I wanted to and an extra 15-30 minutes would have a great of benefit to finish the analyses better. Saying that, I know all of us had the same time for completing the exam and my slow typing cost me valuable time. Overall, it was a great revision and help for all of us who are intending to do time series analyses for our dissertation work. (Student F)*

This comment offers a clear view with regard to time limitations and how students considered the exam to be a valuable way of assessment, but where the facilitation of some extra time to its completion might be deemed appropriate to allow quality thinking and analysis.

The views exhibited by the students show how they were able to consider and reflect on their own learning process, as well as voice their concerns with regard to time limitations to complete an exam, the low weight given to assignments taking into account the amount of work that was required, the difficulty of assignments, and how they have dealt with them. In this regard, the educator and author of this paper received valuable feedback that allowed for a reflection on how the final score of the exam might not be a fair way to assess the students' work. As a result, the educator was able to adjust and redesign the assessment strategy and, over the years, develop a more balanced approach with regard to learning activities, relying less on a final exam.

The use of ePortfolios has allowed the authors to gather some extra information and views on the exam performance and issues that were considered by the students, and have been considered carefully to ensure that the course is properly updated and monitored. The authors argue that the development of an ePortfolio as part of course assignments and activities equips students with valuable skills like: capacity in planning, monitoring and evaluating their own learning, reflecting on their work, and assessing areas of strength and weakness, and developing their own distinctiveness and identity, as future experts in the financial field. All these are valuable attributes that foster self-regulated learning and responsible bidirectional feedback between students and educators that help their students to perform at the best of their abilities.

Figure 1 offers a highlight on the core features on how ePortfolios contribute to the development of quality interactions between students and educators. ePortfolios promote the development of bidirectional responsible feedback and put an emphasis on the student work and the need to encourage self-regulated learning in the classroom.

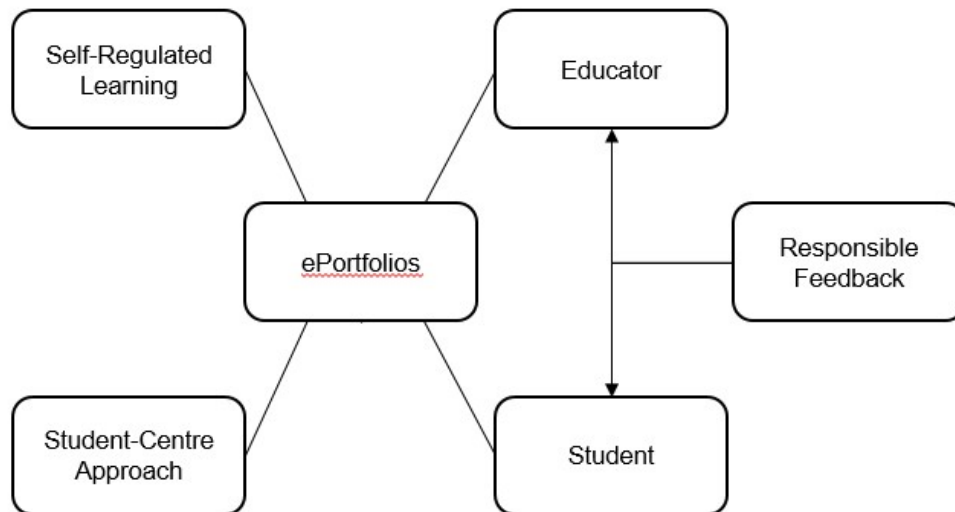


Figure 1. Responsible feedback and ePortfolios.

### ePortfolios and Responsible Feedback

Educators often have great difficulty in understanding and making sense of students' comments on their selected learning and teaching approach and the combination and collection of tasks and assignments planned to support their learning. Quite frequently, educators' views differ from their students' own interests and learning goals. When educators look over students' comments without being able to identify and discern areas that would allow them addressing their students' needs and concerns at the time that help them to progress and advance with their studies. It is quite common to find educators that are frustrated with received comments that appear to be contradictory in nature and that are not very helpful to them when trying to identify areas that require improvement and that can make a real difference to their students learning experience.

Educators should be able to reflect and assess the process of learning the subject matter, to be able to identify what is crucial and necessary to improve their teaching, and make sure that students would be able to align their work to given requirements (Way, n.d.). Educators' inability to link student feedback with their continuous assessment, class activities, and their own understanding of the learning process is driving the detachment between students and educators in the classrooms. In this regard, the use of ePortfolios can help minimize this level of disconnection between students and educators to make sure that feedback is developed in a responsible manner and that it is understood as a bidirectional practice by both educators and students. Bidirectional responsible feedback allows educators to plan and design their courses by aligning their course objectives with their students' level of comprehension, skills, and knowledge, which in the end would help them develop a more efficient reference framework on how the course work should be organized and presented to their students. At the same time, students would be able to relate their own skills and existing knowledge to their course demands and would be in a better position to progress and excel in their learning.

### An Illustration of Student Responsible Feedback

With the aim of exemplifying how responsible feedback works through the use of

ePortfolios, the authors present here some selected examples of responsible feedback offered by students to their educator through the use of their ePortfolio. The authors also offer a brief discussion on the reciprocity of the process and how the educators benefited from student feedback, which helped to restructure the learning and teaching approach and make it more efficient and align it with their students' needs.

*Overall I found the project demanding as there was a lot of small intricate details that had to be thought out before beginning and this slowed the process down. However, with this said I enjoyed the project and the opportunity to view a different crisis period and countries that I may not normally analyse. (Student G)*

From the previous comment, the educator/author was able to appreciate how the student indicated that the given project required a lot of attention to identify those details that were relevant and that were time consuming. After reading this comment, the educator considered and reflected on the need of offering further guidelines and clarifications to facilitate the task to the students and to ensure that they were clear with basic requirements and points that were relevant to their project. The student also indicated that the project offered value to his/her learning experience, as it allowed for the analysis of different issues that s/he might not have considered in a normal case scenario. In terms of making the learning experience more positive and productive, the educator considered providing additional support that allowed students speeding up the learning process and reflected on the need of providing extra coaching with regard to technical analysis on the subject under study. The educator was able to review and reconsider how other students voiced similar concerns and actions were taken to improve the guidelines and support available to students.

*I also found the bi-weekly assignment to be a very good way of picking up marks, but also an opportunity to research new and interesting topics. I also felt that the assignments could be completed at a more relaxed pace than other assignments, meaning that they could be done to a higher standard. (Student H)*

This is an interesting comment from a student that pointed to the need of offering more flexibility with deadlines or reducing the amount of assignments to allow students to focus on the quality of their work. The comment indicates that the student seemed to be happy with the type of assignment and wished to devote more time to its completion with the aim of improving quality standards and developing in depth analysis. In this case, the educator considered the importance of allowing extra time for the completion of the given assignments and reduction on their number to facilitate in depth knowledge and encourage and foster quality standards. Over the years, the educator has been able to restructure the assignments to allow a major focus on quality and facilitate discussions in the classroom.

*A section of the exam that I was not expecting was the inclusion of retrieving of your own data. I thought as in previous years the lecturer would be providing our data. However, this was not the case. This would have been a little more difficult if I had not completed the data training for the exam the previous week (Student I)*

This student observation highlighted the need to offer clear guidelines with regard to exam expectations. The student had the conceived idea that data would be facilitated, but on the day of the exam, s/he found that s/he was required to gather his/her own data set. In this case, the educator considered the importance of providing clear guidelines and detailed information to students that would minimize potential confusion when facing their exam and the importance of



avoiding preconception of ideas that might not align with real course expectations and that could create situations of stress and confusion on the exam day.

*There is not much to say about the exam other than that it felt very necessary and worthwhile. It was similar to an etivity, except it was a two hour one and as mentioned in the Etivities section, going through such a process seems very akin to a situation I believe I may experience in the working world where I will need to compile a detailed report on financial data in a very short period of time. My only suggestion would be to make it longer and allow for maybe one more test in the different options. In doing so I think it gives the student a better opportunity to display their knowledge of the module and allows them more time to execute an extra model and discuss it. A written exam requires you to learn off a ream of material and regurgitate it in a fixed time period, the lab exam tests not only your knowledge of the material, but also the practical aspect of it as well. (Student J)*

The student's reflection offered support to the learning and teaching strategy followed by the educator, and offered clear suggestions on how the exam could be improved. The student identified the strengths and value of the exam and reflected on the significance of being exposed to financial situations that require gathering substantial amount of information and that involves precise and technical analysis. The student offered very good suggestions with regard to the inclusion of additional techniques to be tested by the students and indicated that extra time should be given to ensure that quality work would be developed. Overall, the experience of using ePortfolios, as part of the learning and teaching experience suggests that students are able to benefit from their educators' feedback and they are also able to offer valuable suggestions that would help improving the quality of the work done in the classroom and the appropriateness of selected assignments and tasks. The examples above tend to confirm the authors' recommendation on the use of ePortfolios as an efficient tool that allows bidirectional feedback that helps students and educators to make the learning experience more productive and rewarding.

### **ePortfolios and Self-Regulated Learning**

Professional competence has been defined as "...the habitual and judicious use of communication, knowledge, technical skills, critical reasoning, emotions, values and reflection in daily practice for the benefit of the individual and the community..." (Epstein & Hundert, 2002). The development of professional competences in the financial field relies on the ability of educators to provide responsible feedback to their students that help them to become self-regulated learners that are able to take ownership and being responsible for their education. In this section, the authors explore how ePortfolios can be used to engage students with their learning, as well as ways to help them develop and enhance their communication, technical, and critical thinking skills, which would lead them to become self-regulated and responsible learners.

#### **Self-Regulated Learning**

Abrami et al. (2008) argued that the future of education rests on the ability of the institutions to engage students on their own learning. Students should be able to think in a meaningful and strategically manner that lead and guide them towards active and self-regulated learning. Active learning should be fostered in the classroom, and this means that educators should be able to create learning environments that facilitate problem-solving activities in a critical, creative, responsible and imaginative manner. A student-centered approach is also required in combination with the integration of appropriate technologies that focus the student attention towards course work and the development of skills that would be useful to them in their future

learning and later on in their professional careers. The use of electronic portfolios (ePortfolios), as part of the course assessment, would enable educators to support and facilitate self-regulated learning on specific aspects of the course material at the time that they also look after literacy and communication skills. Research (Rogers & Swan, 2004; Zimmerman, 1989) has shown that students who are self-regulated learners are metacognitively, motivationally, and behaviourally active participants in their own learning process, which leads them to succeed in their academic learning. As an example on how a student would become a self-regulated learner, as well as be aware of his/her own abilities and the gained knowledge through the use of ePortfolios, can be found on the following excerpt from one of the students using an ePortfolio to support his/her learning:

*Writing this section of the eportfolio has been a real eye opener! I'm laughing to myself at how little I know when I completed e-tivity 1 in February. I remember struggling through the questions and spending a huge amount of time doing the tests, but it looks so easy now. It just proves how much I've learned in the last couple of months. Overall I'm now very comfortable using econometric software and have a good understanding of the theory and more importantly how to apply it. I could now come up with a relevant research question, work out the data I need and the tests that are required, run the tests and understand what I'm looking at. I really never thought I'd be able to say that. (Student K)*

From the student comment, and throughout the review of course assignments, the educator/researcher was able to gather sufficient evidence on the students' progress in the course. In line with the student comments, being able to look back and review their learning process and its progress permits to assess how their work evolved and helped the student and the educator to receive constructive and responsible feedback that aims to aid the student in consolidating his/her learning and being confident with gained new knowledge and skills. Additional aspects of self-regulated learning that should be considered as part of the work to be done in the classroom, are the importance of time-management skills and making sure that tasks are completed according to guidelines and requirements. Through the development of ePortfolios, students learn to regulate their own time, to interact with the environment and to focus their attention on the control and effort of required tasks that would help them developing and presenting quality work.

### **Research Findings and Analysis**

The development of an ePortfolio can be defined as a purposeful collection of student work that tells the story of a student's effort, progress, and/or achievement in one or more areas (Arter, & Spandel, 1992). Electronic portfolios are personal learning and management tools that should be blended with a variety of assessment tools to maximize their value and help enriching the student learning experience. Educators should be able to encourage individual improvement, personal growth and development, and self-regulated learning, and electronic portfolios are supported by a variety of tools that facilitates this task and nurture commitment to life-long learning. In line with Perry (1998), "students need to be involved in complex meaningful tasks, choosing the products and processes that will be evaluated, modifying tasks and assessment criteria to attain an optimal challenge, obtaining support from peers, and evaluating their own work".

Educators should be able to recognize their students' needs, and the authors think that they should be able to decide and assess how their learning is progressing. In order to facilitate this, the authors consider that ePortfolios should be blended with a variety of assignments and activities that allow students to be exposed to different situations, where they can use their gained

knowledge and skills and, later on, reflect on their experience in their individual ePortfolio. In this regard, the following comment from one of the students supports the authors' views:

*The lab exam has been one of the requirements that I have feared the most in this course because even though I think that it is a good method of evaluation, especially in a practical course such as Econometrics, the percentage associated to it is 20% of the final mark which looking from the assignments perspective is like the 3 activities and the group project together. What it is true though is that the activities and the group project has been constantly preparation for the lab exam. (Student L)*

When students use ePortfolios as part of their course work, they are able to assume more responsibility for their learning, they gain a better understanding on their strengths and limitations, and they are able to focus on those issues that require further attention to allow them achieving their settled goals (Hyller & Ley, 1996). In the case of the present study, the students were able to reflect on how the course activities were connected, and they were able to elaborate and discuss their views, learning outcomes, strengths, and weaknesses in their individual ePortfolios. Another example on students' reflection on class work and the importance of integrating activities that look at their communication skills in addition to their technical awareness can be found in the following comment from the same student:

*I made a mistake and I said the opposite due to doing public speaking is and it will always be against of me. For me it is a very big challenge and I get very nervous when I have to do it. (Student L).*

The authors' findings and their own experience in the use of ePortfolios indicate that they are valuable when used to support students learning as they facilitate the development of critical thinking skills, and encourage students to become active and independent self-regulated learners (Blackburn and Hakel, 2006; Mills-Courts and Amiran, 1991; Riedinger, 2006; Vucko, 2003;). Another comments from a student looks into the development of a better understanding on the subject matter:

*I gain a much greater understanding of the Asian financial crisis through this assignment, I had previously not studied a crisis from this region and enjoyed learning more about the financial history in Asia. The assignment also increased my knowledge of the models and tests we were using and how to interpret the results from these tests and draw conclusions using the information we got back. (Student M)*

The combination of ePortfolios with a variety of activities in the classroom allows students to be able to manage different tasks and help them to interact with their peers and reflect on the positive and negative aspects of the course work:

*I am very happy that I was a part of such a great group. Our team worked really well throughout the year and I am very grateful that I had the opportunity to meet such a great people. The whole experience of group projects made us much closer which helped us to learn and understand topics with each one of us support and understanding. We felt the pain and rewards together and I must say that we had a lot of fun by doing these projects even though we had to work really hard. (Student N)*

---

## Conclusions

Overall, the students' views and reflections on their coursework allowed the researchers to gain a better understanding of the students' needs and, over the years, it helped to introduce changes and improvements to the courses. The use of ePortfolios as an additional assessment tool has allowed the researchers in this study to design courses that are more structured and that offer better guidelines and support to students. It has also allowed to closely monitor areas that have been identified as difficult to students and to provide more personalized coaching and detailed feedback. Therefore, the researchers conclude that ePortfolios can help to enhance the development of responsible feedback in a bidirectional way in the classroom. The use of ePortfolios has helped the researchers to keep students engaged and motivated, and has facilitated the communication and bidirectional feedback process that has permitted the continuous improvement in those courses supported by the use of ePortfolios.

The theoretical and practical contribution of this research paper to the existing area of knowledge is the addition of objective evidence that spanned over seven years of dedicated use of ePortfolios to support postgraduate students aiming to specialize in the financial field. The researchers identify ePortfolios as being a complementary tool that help educators and students to get a better understanding of the course material and that offers students an opportunity to reflect on their own learning and course performance. Students are able to reconsider and review the work done and reflect on those areas that did not work for them, and at the same time they are able to analyse those aspects that were successful and that would help them to move forward in their lifelong pursuit of learning. Being able to reflect in a critical and constructive manner on positive and negative aspects of their learning experience equip students with valued awareness of their own skills and identify areas that require attention and improvement. In addition, students are able to reflect and consider those aspects of their learning process and how they are connected to their current/future professional careers that will allow them connecting academic work with real work experiences.

It is evident students and instructors are able to develop bidirectional responsible feedback that contributes to highlight the invaluable role of ePortfolios when helping educators accepting their need of getting a better understanding of their students' feedback and re-consider their own role in the whole process. Educators should be able to offer more support to their students and should be able to connect to their needs and frustrations in the assigned classwork. Although the use of ePortfolios, as part of the course work, may bring many challenges, it can also bring many opportunities and benefits to students and educators. However, the feedback and assessment process may require "a greater investment of time and effort" (Hounsell, 2008) and this is a very important matter that should be discussed and analysed in depth and that is subject for future research.

## References

- Abrami, P., Wade, A., Pillay, V., Aslan, O., Bures, E. M., & Bentley, C. (2008). Encouraging self-regulated learning through electronic portfolios. *Canadian Journal of Learning and Technology*, 34(3).
- Arter, J.A., & Spandel, V. (1992). Using portfolios of student work in instruction and assessment. *Educational Measurement: Issues & Practice*, 11(1), 36-44. <http://dx.doi.org/10.1111/j.1745-3992.1992.tb00230.x>

- Blackburn, J., & Hakel, M. (2006). Enhancing self-regulation and goal orientation with ePortfolios. In Jafari & Kaufman (Eds.), *Handbook of research on eportfolios* (pp. 83-89). Hershey, PA: Idea Group. Reference. <http://dx.doi.org/10.4018/978-1-59140-890-1.ch009>
- Epstein R.M., & E. M. Hundert. 2002. Defining and assessing professional competence. *Journal of the American Medical Association*, 287(2), 226–235. <http://dx.doi.org/10.1001/jama.287.2.226>
- Ring, G., & Ramirez, B. (2012). Implementing ePortfolios for the assessment of general education competencies. *International Journal of ePortfolio*, 2(1), 87-97.
- Heinrich, E., Bhattacharya, M., & Rayudu, R. (2007). Preparation for lifelong learning using ePortfolios. *European Journal of Engineering Education*, 32(6), 653-663. <http://dx.doi.org/10.1080/03043790701520602>
- Hounsell, D. 2008. The trouble with feedback: New challenges, emerging strategies. *Interchange*, 2, 1-9.
- Hyllyer, J., & Ley, T. C. (1996). Portfolios and second graders' self-assessments of their development as writers. *Reading Improvement*, 133, 148-159.
- Lam, R. (2010). The Role of Self-Assessment in Students' Writing Portfolios: A Classroom Investigation. *TESL Reporter*, 43(2), 16-35.
- Maclsaac, D., & Jackson, L. (1994). Assessment processes and outcomes: Portfolio construction. *New Directions for Adult and Continuing Education*. 62, 63-72. <http://dx.doi.org/10.1002/ace.36719946208>
- Mills-Courts, K., & Amiran, M. R. (1991). Metacognition and the use of portfolios. In P. Belanoff & M. Dickson (Eds.), *Portfolios process and product*. Portsmouth: Boynton/Cook Publishers Heinemann.
- Nicol, D. J., & Macfarlane-Dick, D. (2006). Formative assessment and self-regulated learning: A model and seven principles of good feedback practice. *Studies in Higher Education*, 31(2), 199-218. <http://dx.doi.org/10.1080/03075070600572090>
- Perry, N.E (1998). Young children's self-regulated learning and contexts that support it. *Journal of Educational Psychology*, 90, 715-729. <http://dx.doi.org/10.1037/0022-0663.90.4.715>
- Putwain, D. W., & Daly, A. L. (2013). Do clusters of test anxiety and academic buoyancy differentially predict academic performance? *Learning and Individual Differences*, 27, 157-162. <http://dx.doi.org/10.1016/j.lindif.2013.07.010>
- Riedinger, B. (2006) Mining for meaning: Teaching students how to reflect. In Jafari & Kaufman (Eds.), *Handbook of Research on ePortfolios* (pp. 90-10). Hershey, PA: Idea Group.
- Roberts, P., & Maor, D. (2012). ePortfolios to scaffold the development of reflective practice in bachelor of education students. In World conference on e-learning in corporate, government, healthcare, and higher education, (pp. 1274-1279). Chesapeake, VA: Association for the Advancement of Computing in Education (AACE).

- Rogers, D., & Swan, K. (2004). Self-regulated learning and Internet search. *College Record*, 106(9), 804-1824.
- Vucko, S. (2003). Going beyond I like it in a portfolio context: Scaffolding the development of six grade two learners' reflections [Unpublished Master's Thesis]. Department of Education, Concordia University, Montreal, QC.
- Way, D. G. (n.d.). Teaching Evaluation Handbook. Ithaca, NY: Cornell University Press.
- Weigle, S. C. (2002). Assessing Writing. Cambridge, UK: Cambridge University Press.
- Wickersham, L. E., & Chambers, S. M. (2006). ePortfolios: Using technology to enhance and assess student learning. *Education-Indianapolis Then Chula Vista*, 126(4), 738-746.
- Yusuf, J., & Tuisawau, P. (2010). Student attitudes towards the use of ePortfolios: Experiences from the University of the South Pacific. *Malaysian Journal of Educational Technology*, 11(4), 31-41.
- Zimmerman, B.J. (1989). A social cognitive view of self-regulated academic learning. *Journal of Educational Psychology*, 81, pp. 329-339. <http://dx.doi.org/10.1037/0022-0663.81.3.329>