

**The Use of Portfolio-Based Assessment in an Enquiry Approach to Enhancing and Assessing Entrepreneurial Learning**

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# ECIE 2016 – Submission for Innovative Teaching Award

Submitted by Kiefer Lee

## **Title of the Initiative**

The Use of Portfolio-Based Assessment in an Enquiry Approach to Enhancing and Assessing Entrepreneurial Learning

## **Introduction**

This teaching initiative is concerned with the use of portfolio assessment and the role it plays in an enquiry-based approach to teaching, learning and assessment within an entrepreneurship education curriculum. It adopts the view that assessment can shape how students view the curriculum, and make decisions about what to learn and how to approach their learning. As Boud (1995: 37) suggests, “every act of assessment gives a message to students about what they should be learning and how they should go about it”. It is therefore essential that the assessment used give the right messages to students about what they should be learning. Enquiry-based approaches to learning demand a more student-centred pedagogy that promotes self-awareness, reflection and collaborative learning. Such approaches together with their integrated assessment strategies empower learners to take more responsibility thereby increasing their engagement through improved motivation (Bandura, 1977; Feuerstein, 1991). In this sense, it can be argued that the ability of the learners to monitor their own progress can be developed through the use of portfolio-based assessments.

The definitions and use of portfolios have been effectively dealt with elsewhere by a number of authors in literature (e.g. Foster and Masters, 1996; Braume and Yorke, 2002). Portfolio-based assessments emphasize the collection of work which include a reflective commentary (Klenowski et.al., 2006) and/or information collected in evidence of the owner’s learning process and/or competence levels. They can be used to great effect to assess performance in authentic contexts and encourage learners to reflect on their performance due to the richness of the information they supply. They enable the learners to “present documentation of their personal, authentic, educational experiences and experiences in real practice” (Driessen et.al., 2005: 215). Within the context of this initiative, the main purpose of using portfolio-based assessments is to keep students focused on the learning process in their own enquiry, in which they are given the opportunity to engage in organising information, analyses, critical investigations and self-reflection.

Based on a case study of a group of 72 full-time postgraduate marketing students over a 3-month academic semester, this teaching initiative was designed to explore how portfolio-based assessment could enhance student learning and foster autonomy through the completion of assessed enquiry-based activities which include reflection and self/peer learning. Its main research question was to evaluate the effectiveness of such an approach in enhancing and assessing learning within an entrepreneurship curriculum.

## **The infrastructure**

The initiative was implemented within an entrepreneurship module which formed part of the core curriculum of a full-time Masters programme in marketing. The pedagogy underpinning this module emphasises the entrepreneurial process and innovation - i.e. the processes involved in developing business innovations rather than new venture creation. Based roughly on Tan’s (2003) approach, the curriculum primarily uses real business problems and scenarios as anchors around which learners achieve the learning outcomes through a process of actively working on self-determined, open enquiries. By presenting these real business problems/scenarios as focal points, learners as active problem-solvers and teachers as learning mediators, the enquiry-based learning approach can better facilitate

the acquisition of problem-solving, communication, teamwork and interpersonal skills and attributes synonymous with entrepreneurial learning. Instead of having a didactic delivery in which students are passive learners, students are presented with an open enquiry i.e. the creation of a business innovation. This enquiry triggers learning by placing the onus on the students to: (a) define the enquiry (what is the innovation?); (b) analyse the enquiry (what is the make-up of the innovation?); (c) generate ideas or hypothesis (what are the sources of innovation? Which idea on which to base the innovation?); and (d) identify learning issues (what knowledge and skills are required to achieve the required learning outcomes? How would I go about doing it?).

In this initiative, students were required to work in a learning set of three to four to discuss what they learnt after each learning session and how they would apply that learning into their enquiry. They asked themselves questions, such as what they know, what they need to know and what ideas come to mind. They were expected to articulate their enquiry and described the scope of their engagement with it. They needed to inquire, seek information from books and websites, and think about how to solve their immediate problems, and ultimately, develop a strategy that would help them launch an innovation in a chosen market.

The assessment is an integral element in this pedagogy and is designed to facilitate and drive student learning, and act as an important mechanism through which assessment 'of' and 'for' entrepreneurial learning is undertaken. Each student was asked to develop a Project Portfolio incorporating four written learning logs which were used to evidence reflective thinking and entrepreneurial learning. Each log was approximately 1000 words in length. The portfolio was introduced to the students as an effective learning tool and were encouraged to incorporate as many relevant materials as possible which could include: chapters of books, journal articles, internet sources, statistics, newspaper articles, images, drawings, diagrams and anything that they would find useful in their project. In this way, the portfolio provided important information about the student's learning as well as their approach to managing that learning process.

All portfolios were assessed at the end of the modules and given a grade. During the semester, students were given opportunities to discuss their progress with their tutors, who would provide constructive formative feedback. The assessment criteria were subdivided by four headings, namely:

- (a) Planning - focuses on the student's ability to assess learning needs, define objectives and plan work accordingly;
- (b) Reflection - covers the student's ability to reflect on and assess progress made, and the extent to which feedback given is detailed and constructive;
- (c) Performance - aims to encourage students to select materials and/or perform tasks to the required standard for their level of study; and
- (d) Progression - focuses on evidence of development and progress (e.g. acting on feedback).

As students deliberated on the enquiry, brainstormed and discussed collaboratively, they were expected to draw up their learning issues and how they worked to address them. As a form of assessment for learning, the portfolio is therefore capable of assessing the 'process' as well as 'outcomes' of learning.

### **The challenges**

There were two main challenges. First, acquiring ethical approval from my institution to implement this teaching initiative was slightly problematic due to a perceived ethical problem. The main issue was related to the most suitable role from which to implement this initiative within a module in which I taught, a role which warranted my presence as a lecturer and permitted features of data collection for this initiative such as asking questions and taking notes. To operationalise this initiative, I found it essential and pragmatic to 'slip between roles' as a researcher and

lecturer/tutor as the occasion determined. This researcher-teacher duality brought with it potential tension and ethical issues which needed to be carefully considered. Firstly, there is the issue of confidentiality. The identities of students who took part may be identified due to the setting (i.e. the university in which they study) and context (i.e. the course on which they enrol). To address this, data and names were anonymised so that no single student could be identified by a third party. Further, there was also the issue of consent to participate in the initiative. To address this, I made clear to the participants that the data captured in the project would not be shared and/or discussed with a third party without their written permission. Any published work from this project would not identify the names of any participating students. All participants were clearly briefed from the beginning that their participation was entirely voluntary and in no way would jeopardise their studies or work. After two resubmission of ethical approval applications, the approval for implementing this initiative was eventually granted.

Second, the use of portfolio as a form of assessment 'for' and 'of' learning is not a familiar notion to a typical business student as they are more used to writing reports, essays and examinations. The very notion of portfolio as a 'collection of work' could help students to think about and prepare for their future careers as involving many jobs and evolving skills, something to which career literature refers as 'portfolio careers'. When first introduced, a number of students expressed some concern due to their unfamiliarity with it and were anxious of being assessed by this form of assessment. To prepare students to make effective use of their portfolio, I spent time familiarising students with the use of a portfolio by providing them with examples and writing tips, and reassure them by offering regular informal feedback on their work.

### **How the initiative was received by the learners**

To evaluate how well the initiative was received, a combination of students' portfolio entries and focus groups were analysed using qualitative data analysis. The following extracts are typical of the entries found in the majority of student portfolios and the focus group transcripts, and as such are illustrative of the key findings.

#### Planning Learning and Progression

The following entries show evidence of sequencing activities and defining objectives based on perceived learning needs:

##### Defining Own Learning Goals

"In order to improve my interpretation skills, I am going to choose tasks that will enable me to practise my note taking techniques."

"Assessment gives me the opportunity to put my idea into practice...It helps me manage my strengths and weaknesses, and want to improve my creativity."

##### Development of Learner Autonomy

"When I write a log, I 'want to' read more books. But when I write assignments for other modules, I 'have to' read."

"The portfolio helps me find out what I need to improve and drive me to do so as soon as possible."

#### Reflection and Performance

The following entries show student's ability to reflect on and assess progress made:

## Reflection on successful learning

"I found the learning set most useful...The main reasons for this is because I was in a group of three whereby each group member contributed significantly to our discussion. Each point discussed was debated enthusiastically and each view was well justified by all group members."

"It helped me very much in developing my learning because I must think of a new product or idea everyday...how to progress and achieve the goal. It is challenging!"

"It is amazing to learn from the portfolio. If you do not do this, you never think how much time people put into the company and product to present it to the world."

## Assessing progress made

"I found that I almost forgot important grammatical structures on the spot. I knew that I had said something wrong once I had said it..."

"The assessment makes me realise my shortcoming in generating new ideas. A real innovation is much more difficult than I thought. However, I could improve myself through the assessment."

## Progression

The following entries provide the evidence of how students progress on their learning and development of skills. For instance, when prompted, the students were able to reflect on how the different types of feedback (e.g. peer, tutor, in-class and email) can help them learn and feed-forward to subsequent assessment tasks and beyond.

### Acting on Feedback

"We are all happy to learn something from feedback. In this way, we can correct our mistakes for the final submission."

"Feedback is a major part of learning. It makes better understanding about our work. Otherwise we don't know if it is right or wrong."

### Developing Professional Skills

"Other modules are not linked to practice. But this module made me practise what I have learnt from the materials."

"Pitch for ideas and selling them; strategic thinking; decision making."

"Meeting deadlines; how to do detailed industry analysis; taking my thinking to the next level; what preparation is needed to convince investors."

## **The learning outcomes**

The findings suggest that portfolio can be a very useful assessment (as well as learning) tool to help students recognise the complexity of entrepreneurial learning and to enable 'learning by doing'. Most students understand that the portfolios are both formative and summative in purpose, giving them the time and space to understand their learning by recording, analysing and reflecting on their acquired knowledge over time. In their own idiosyncratic ways of learning, they are able to summarise their understanding of key issues, make connections and draw out what they think were important for their learning.

Further, the use of portfolios has quite clearly encouraged students to develop and use their capacity for autonomy in managing their own learning. There is a lot of evidence to suggest that students develop a strong motivation to carry out independent studies and make necessary self-directed efforts in order to 'get the job done'. Learner control implies a power shift both within and outside the classroom, with the tutor moving from a directing role to more of a partner in the learning process. The findings of this study suggest that this so-called 'power shift', given the right conditions, can result in the development of learner autonomy in students.

The following are what have been learnt from these findings that can impact on academic practice:

- The effectiveness of such an approach depends on the design. There are different types and forms of portfolio. The design of the portfolio assessment and the purpose it serves must be well-defined. Whatever its design, it should be viewed as a means to an end i.e. as a learning (if applicable, evaluation/assessment) tool that enables progressive learning and exploration of theories/concepts/ideas in a specific professional or real-world context.
- The effectiveness of portfolio-based assessment in an enquiry-based curriculum depends upon a shift from a receptive-transmission approach to a co-constructivist one in which students construct knowledge, with the help of their tutor, which they think meaningful. The opportunity for students to have some control over their learning and make choices plays a key role in fostering the autonomy in managing own learning. This will require a shift in the tutor's role from acting as the expert who owns the knowledge to a coach or facilitator of learning.
- Effective use of feedback is central to enabling students to develop and positively engage with their own learning. Both students and tutors need to recognise how feedback can effectively 'feed-forward' to subsequent learning. This notion of feedback for learning is consistent with the philosophy of learning through self-development engendered by enquiry-based learning.
- In co-constructivist approaches, the tutor is responsible for actively establishing a learning context within which students progressively develop learning autonomy. If we regard the notion of learner autonomy as an important outcome of an enquiry-based approach to learning, then assessment needs to reflect this change in emphasis.

### **Plans to further develop the initiative**

The initiative has offered a useful first step from which we learn about the role of portfolio-based assessment in enhancing student experience of learning through an enquiry-based learning approach. The findings suggest that this form of assessment would not only facilitate student development of knowledge about the subject matter but also entrepreneurial and professional skills. Through the use of portfolio assessments, they are able to associate their existing knowledge and learning with real-life, professional contexts that enhance their skills and abilities in their field of study.

To further develop this initiative, I intend to pursue the following in the next 12-18 months:

- a. Conduct a larger study with a longitudinal design in order to develop a deeper understanding of the use of portfolio-based assessment within the complex process of entrepreneurial learning. The research that underpin this study will be based on a longitudinal study of 100 full-time undergraduate students who are enrolled on a range of business, marketing and enterprise courses. Over a period of 10 months, these students will be surveyed a number of times to illuminate how they engage with portfolio-based assessments to develop entrepreneurial learning. The findings will be presented to my institution's Enterprise Centre with the aim to inform the institution's strategy on entrepreneurship education.
- b. Share and disseminate the findings of this initiative in the relevant research communities with the aim to recruit co-researcher/collaborators to trial portfolio-based assessments in their own institutions. This

would encourage cross-institutional knowledge exchange as well as potential research outputs which informs academic practice on enhancing and assessing entrepreneurial learning.

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