

# A sounding board for learning: online student experiences of learning portfolio practice

## Abstract:

This paper reports on a qualitative case study set in Dublin City University which explored online student experiences of learning portfolio practice and its relationship with critical thinking development. Data was collected from participant generated learning portfolios and semi structured interviews. A data-led thematic analysis approach was adopted in which five themes were constructed. The findings from the study indicate that the learning experiences of online learners were enhanced by their engagement with learning portfolio practice, which created a personal place or sounding board to process and document their learning and lives in real and meaningful way. In addition, the findings suggest that learning portfolio practice may enhance the development of critical thinking skills within a disciplinary context.

## Introduction

This case study set out to explore online student experiences of learning portfolio in general and specifically the relationship between learning portfolio practice and critical thinking skills development. The study followed twenty-four online students over one academic year studying for a humanities degree with DCU Connected at Dublin City University (DCU).

There are a wide range of definitions of eportfolio, as eportfolio can be defined as a technological tool, a practice, an assessment method, and as a learning framework (Chen & Black, 2010). This study was focused on the developmental aspects of eportfolio practice, therefore a learning oriented definition was adopted that defines a “learning portfolio as a vehicle for bringing together judiciously selected samples of students’ work and achievements inside and outside the classroom for authentic assessment over time. The learning portfolio, then, becomes more than a product, a simple repository of artefacts; it becomes a process of reflection, of organizing, prioritizing, analysing, and communicating one’s work and its value, which may prompt insights and goals” (Corley & Zubizaretta, 2012, p. 65).

Although critical thinking has been perceived one of the key outcomes of higher education, this outcome is often unfulfilled with university students graduating with underdeveloped critical thinking skills (Dunne, 2015; Ennis, 2016). One method to fostering critical thinking skills may be through new modes of learning and assessment such as learning portfolio practice. Recent research indicates the learning portfolio practice can positively impact on student learning and achievement at higher education level, by enabling students to integrate authentic learning in a meaningful way (Bolliger & Shepherd, 2010; Eynon & Gambino, 2017, Farrell & Seery, 2018). However, there is a dearth of research on the relationship between learning portfolio practice and critical thinking (Bryant & Chittum, 2013; Farrell & Seery, 2018; Farrell, 2019).

## Theoretical Framework

This case study was bounded by the *critical folio thinking* theoretical framework which draws on the literature on critical thinking and learning portfolio (Farrell & Seery, 2018; Farrell, 2019). The Critical folio thinking pedagogical approach to learning portfolio effective practice, emphasizes four key components: the learning process, critical thinking skills, reflection and discipline context, see figure 1 below (Farrell & Seery, 2018; Farrell, 2019). The following section elaborates on each of the constituent elements of the theoretical framework.



Figure 1. Critical Folio Thinking (Farrell & Seery, 2018; Farrell, 2019).

### **The learning process**

Developmental learning portfolios focus on the process of learning thus enabling students to reflect on how, why and what they learned which can develop reflective judgement and higher order learning (Zubizarreta, 2009). There are theoretical links between learning portfolio and critical thinking in the literature, for example Zubizarreta (2009, p. 10) argues that “the intrinsic merit of learning portfolio is that involving students in the power of reflection, the critically challenging act of thinking about their learning and constructing a sense of the learning experience as a coherent, unified, developmental process”. In addition, Light, Chen, and Ittelson (2012, p. 7) contend that “documenting learning is perhaps one of the most important ways for students to develop their critical thinking skills”.

### **Critical thinking skills**

Critical thinking is a fundamental academic competency and is not just a skill but rather a state of mind. This study places itself firmly in the normative tradition of critical thinking which centres on values and quality of thinking (Fisher & Scriven, 1997) As such, critical thinking is defined as “a judgement process. Its goal is to decide what to believe and/or what to do in relation to the available evidence, using appropriate conceptualizations and methods and evaluated by the appropriate criteria” (Facione & Facione, 2008, p.1). Core critical thinking skills are: interpretation, analysis, inference, self-regulation, evaluation, and explanation (Facione & Facione, 2008).

### **Reflection**

One of the most common themes in the eportfolio literature is the centrality of reflection to learning portfolio practice (Brandes & Boskic, 2008; Jenson, 2011; Landis, Scott, Kahn, 2015). For online students, reflecting on their experiences in their learning portfolios over time enabled them to develop more complex interpretations of their learning processes (Brandes & Boskic, 2008; Shepherd & Bolliger, 2014). Yancey (2009) found that across institutions eportfolio fostered and supported reflection, that reflection happens in context, portfolio structure shapes the nature of student reflection, reflection is an iterative process, and that reflection in

portfolios is a knowledge making activity. In summary, reflection is considered to be the central vehicle for learning portfolio practice, it can be challenging for students to master but through scaffolding and use of reflective prompts can create a powerful learning experience.

### **Discipline context**

In the critical thinking literature, there is disagreement over the acquisition of critical thinking skills in a general or discipline specific context (Moore, 2013). However, empirical research conducted by Abrami et al. (2015) found that the discipline-specific student cohort demonstrated much greater improvements in critical thinking over the generic one. Similarly, Niu, Behar-Horenstein, and Garvan (2013) found that discipline impacted on interventions which were effective in fostering students’ critical thinking skills. This study adopts a discipline embedded approach to critical thinking skill development, therefore the learning portfolio intervention is integrated into the curriculum design of the case study sociology module context.

In summary, effective learning portfolio practice following the critical folio thinking framework is grounded in a discipline, with an increment design which focuses on the process of learning through the medium of reflective writing

### **Methodology**

The case study adopted an exploratory holistic single-case design where the “object of the study” was the single issue of the student experience of using a learning portfolio and the process of developing critical thinking were investigated (Creswell, 2007). The research question for the study was:

*Can eportfolios enhance the nature of the learning experience and the development of critical thinking among online distance learners?*

The setting for the study was an undergraduate sociology module on the BA (Hons) in Humanities, an online programme delivered through DCU Connected at Dublin City University. Following an open and distance Learning philosophy, DCU Connected aims to afford educational opportunities to adult students.

Purposive sampling was used to select participants for the case study, twenty-four online students consented to take part in the study. Data was collected from participant generated eportfolio entries and two sets of semi structured interviews. Two instruments were developed: a learning portfolio instrument and an interview schedule. Participants were interviewed with their learning portfolio, which were used as stimulus during the interviews (Prosser & Loxley, 2008). Data collection in this study occurred in five phases, starting with recruitment, followed by participant induction to eportfolio, then concurrent participant completion of eportfolio entries and interviews, see figure 2 below.

<b>PHASE</b>	<b>DESCRIPTION</b>	<b>TIME PERIODS</b>	<b>DATA COLLECTION TOOLS USED</b>
Recruitment phase	General information session	September 2016	Plain Language Statement, Consent Form
Phase 1	Briefing and support sessions on using the learning portfolio platform	September- November 2016	Learning portfolio instrument

Phase 2	Participants completed 5 learning portfolio entries	October 2016-March 2017	Learning portfolio instrument
Phase 3	Interview 1	January 2017	Semi Structured interview
Phase 4	Interview 2	May-June 2017	Semi Structured Interview

Figure 2. Summary of Data Collection Activities

A circular model of data collection and analysis was followed and data analysis was an ongoing and iterative process (Miles & Huberman, 1994). The analysis followed a data-led thematic analysis approach based on Braun & Clarke's (2006) six phases and comprised of several cycles of coding, theme generation, refining and reviewing themes. Through this analysis process five themes were constructed with reference to the research questions, literature and the critical folio thinking framework.

## Findings

Following the analytical process, five themes were constructed:

1. Being an online student
2. Learning portfolio practice
3. My approach to learning
4. Critical thinking in my learning portfolio
5. The sociology discipline context

(Farrell & Seery, 2018; Farrell, 2019)

### Being an online student

This theme encapsulated the challenges of being an online student in terms of lifeload issues such as balancing competing demands of family, work and illness and finding sufficient time for study. Participant narratives emphasized the importance of institutional, peer and teacher support to their learning experiences.

“I am a busy mother of five so I find the learning portfolio suits my lifestyle, it would be difficult for me to get to classes so I find I work my study around the children. I keep books in my car and study while I wait at football practice and I love the fact that I can look over an online class later in the evening.” (P14 entry 1).

### Learning portfolio practice

Participant narratives described learning portfolio practice as a personal informal space to reflect and evaluate their learning and as a place or sounding board for trying out ideas and applying their sociological theory to their real world examples. Learning portfolio practice allowed participants to integrate their personal and academic selves, this is evident in the word cloud about learning with an eportfolio created by P16 in her final eportfolio entry. She describes her experience of learning with an eportfolio in the rationale for the word cloud as

“I have included a word cloud of the learning portfolio. This sort of adds a conclusion and summary of the main topics covered throughout my 5 reflective entries. The words include module topics as well as personal feelings and development. The topics and evidence covered differed throughout the task of this reflective eportfolio allowed me to broadly touch on how my experiences related to the main Soc3A topics being covered, as well as my own personal growth and development as a learner.” (P16, eportfolio entry 5)



“I: And do you feel like you’ve changed or developed as a learner?”

P10: Yeah I have, even in that small way of changing techniques, I think it does because I’d notice sociology in life being more obvious now but I wouldn’t necessarily reflect that I’m doing that, as aware. So this is kind of making me aware oh I’m actually almost becoming a mini sociologist just doing this.” (P10, interview 1)

## Discussion

The findings from this study that learning portfolio practice had an impact on online students learning experiences through the development of self-awareness and that by documenting and evaluating learning their progress became more real to students. These findings support previous research, which found that students perceived that learning portfolio practice made them more aware of their growth and development (Eynon & Gambino, 2017). These findings support Corley and Zubizarreta’s (2012) theory, which emphasises the developmental process of learning through reflection, which is a key element of the critical folio thinking theoretical framework for this study.

This study found that participants documented the development of their personal study strategies approaches their learning portfolio. Although, this is consistent with research carried out by Eynon and Gambino (2017) and Kabilan and Khan (2012), one point of difference is that there are no previous studies have examined online students’ learning approaches, as documented by learning portfolio practice (Farrell & Seery, 2018).

The findings from this study suggest that learning portfolio practice enabled the development of the critical thinking skills. This confirms the theoretical connections between learning portfolio practice and critical thinking development suggested by Zubizaretta (2009) and Light et al. (2012). Therefore, this study makes an original contribution that learning portfolio practice supported the development of critical thinking skills within a discipline context for online students. In this study, critical thinking development was closely linked with the application of sociological theory to real life, and the growth in sociological imagination. This finding is in keeping with Grauerholz & Bouma-Holtrop (2003) theory that critical thinking within sociology requires sociological knowledge, and awareness, and employs the sociological imagination. It is also in line with Abrami et al. (2015) findings that exposure to authentic problems was an effective strategy for developing critical thinking skills.

## Conclusions

The findings of this study indicate that it would be beneficial for online student learning experiences to include learning portfolios in online degree programmes. As the nature of the learning experience for online students was enhanced by reflecting on their personal approaches to learning in their eportfolio, giving a unique window into their learning approaches. The evidence from this study suggests that the learning portfolios should be embedded within a discipline context to encourage critical thinking development. Finally, the findings of this study suggests that the design of learning portfolios which use of critical question prompts may stimulate the development of critical thinking skills.

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