

## What is it like learning with an eportfolio for online distance learners?

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### **Abstract**

This paper reports on a doctoral research project which examines the nature of the learning experience of using an eportfolio and whether it enhances the development of critical thinking among online distance learners. It aims to interrogate the process of the development of critical thinking rather than the product. The project adopts a case study approach, following 24 online distance learners over the course of one academic year in a Dublin based third level institution.

The research question for the study is: How can eportfolios enhance the nature of the learning experience and the development of critical thinking among online distance learners? This study is using an exploratory holistic single-case design where the “object of the study” is the of the learner experience of using an eportfolio and the process of developing critical thinking are investigated.

The participants are intermediate online distance sociology learners studying a module called Soc3A- Power, Social Order, Crime, Work and Employment as part of the BA (Hons) in Humanities which is a modular humanities programme whereby learners can study a combination of history, sociology, literature, psychology and philosophy. Participants have used their eportfolios to create a critical commentary of their learning and completed five eportfolio entries over the course of one academic year at key points in their learning journey. Eportfolio entries follow a prescribed structured template of critical questions intended to encourage reflection about their learning.

Within this case study 37 interviews were conducted for an in-depth exploration of the learner experience of using an eportfolio and the development of criticality. The participants were interviewed with their eportfolios, written, visual and physical artefacts from the participant’s eportfolios were used as stimulus during the interviews using the technique of “photo elicitation”.

**Keywords:** eportfolio, online distance learners, critical thinking, assessment as learning

### **Introduction**

Eportfolios are common in American higher education, with 57% of colleges using eportfolio. (Eynon & Gambino, 2017) Similarly in the UK, a survey carried out in 2014 highlighted that 78% of universities now have a centrally supported e-portfolio tool. (UCISA, 2014) However in Ireland, there has been a relatively slow pace of adoption of eportfolio, a recent report carried out by the (Irish) National Forum for the Enhancement of Teaching and Learning found that less than 10% of Irish higher education students were engaged in portfolio based assessment. (National Forum, 2016) There are indications that pockets of Irish higher education institutions are beginning to engage with eportfolio, a recent national project ePortfolio Hub carried out a faculty survey which found 31% of respondents were only beginning to use eportfolio which indicates an increasing interest in eportfolio in Irish higher education. Dublin City University is the exception to this slow adoption of eportfolio in Ireland, with the introduction of a campus wide learning portfolio called Loop Reflect for 16,000 students in May 2017.

As one of 17 eportfolio pilots carried out in 2016/17 in Dublin City University, this case study details the introduction of an eportfolio based assessment to online distance learners studying on the DCU Connected BA Humanities/BA Humanities (Psychology Major), supported by the Open Education Team, in Dublin City University (DCU), Ireland. The case study reports on a doctoral research project which examines the nature of the learning experience of using an eportfolio and whether it enhances the development of critical thinking among online distance learners in higher education.

### **Theoretical frameworks**

The case study is bounded by two theoretical frameworks; a critical thinking skills framework and an eportfolio framework.

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, quality of thinking and formulation of evaluative judgement. (Fisher & Scriven, 1997) In this case study, critical thinking is “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) This critical thinking framework has shaped the design of the case study, in particular the data gathering instruments; the eportfolio critical questions template and the interview protocol.

The conception of eportfolio in this case study brings together three distinct theoretical approaches to eportfolio practice; Zubizarreta’s learning portfolio, Chen & Black’s folio thinking and Eynon & Gambino’s Catalyst framework for high impact eportfolio practice. Zubizarreta’s model brings together eportfolio and critical thinking. In particular, the elements of Zubizarreta’s learning portfolio model that emphasise critical thinking and developmental process, “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.” (Zubriezetta, 2008, p.1) Chen & Black’s folio thinking highlights that eportfolio practice should be a “pedagogical approach that focuses on designing structured opportunities for students to create eportfolios and reflect on their learning experiences.” (Chen & Black, 2010) This focus on eportfolio practice and pedagogy rather than technology is fundamental and is shared by Eynon & Gambino’s Catalyst framework for high impact eportfolio practice. The Catalyst Framework provides a much needed evidence based approach to eportfolio practice, the features of the framework of particular relevance to this case study are the three design principles of inquiry, reflection and integration and the strong focus on pedagogy. (Eynon & Gambino, 2017)

In summary, the model of eportfolio based learning for this case study is the process of eportfolio based learning is transformative, personal and empowering for learners. Effective eportfolio based learning can stimulate critical thinking, integrate learning, provide space for learners to experiment and apply theory and reflect on their learning journey. The process of learning with an eportfolio is meaningful, authentic and promotes deep learning. (See figure 1 below)



Figure 1: My conception of eportfolio based learning

### The Setting

Dublin City University (DCU) is a young, dynamic and the fastest growing university in Ireland. With over 16,000 students studying across a range of disciplines; education, science, engineering, computing, humanities, nursing, psychology. DCU considers itself “Ireland’s most innovative University” and has a unique mission to “transform lives and societies through education, research and innovation”.

The setting is the Open Education Unit, which is part of the National Institute of Digital Learning and is a provider of online, ‘off-campus’ DCU Connected programmes. By providing traditional Distance Education programmes beginning in 1982, and now online, ‘off-campus’ programmes, the unit has as its core mission the provision of programmes that provide students with the opportunity to attain their educational goals without being required to attend campus-based lectures/tutorials on a regular basis. As an Open and Distance Learning (ODL) provider it has a special remit to afford educational opportunities to students who have not managed to access more traditional entry routes into higher education.

This case study relates to the DCU Connected Undergraduate Humanities Programmes offered by the Open Education Unit, which includes three qualifications: the Bachelor of Arts (Hons) in Humanities; the Bachelor of Arts (Hons) in English and History; and the Bachelor of Arts (Hons) in Humanities (Psychology Major). The original Humanities Programme began in 1993 while the other two programmes were created in 2011 and 2014 respectively.

The Humanities programmes are modular degrees whereby students can study a combination of history, sociology, literature, psychology and philosophy. The modules are delivered through a blend of virtual online tutorials and face to face sessions. The majority of Humanities learners are adults over the age of 23 combining study with time consuming life commitments, such as work and family.

Our pilot of eportfolio practice, was one of 17 pilot studies involving 3,000 users and fifteen staff across the areas of humanities, education, science, nursing, theology, careers, work placement, student support in DCU in 2016/17. The aim of the pilots was twofold, firstly to test a new university eportfolio platform called Loop Reflect, a customised Mahara instance, before scaling up campus wide in 2017/18. Secondly there was a need to fulfil a key strategic aim for the University outlined in the 2012-17 strategy which was to “support the learning and personal development of our students by mainstreaming and further developing Generation 21 and introducing personal archives (e-Portfolios) for every student to record and reflect on the aptitudes developed by them.”

### **Eportfolio Practice Detailed Description**

The case study follows 24 online distance Humanities learners over the course of one academic year, which piloted the use of an assessment as learning approach using an eportfolio. There were 35 learners, of whom 24 opted to take part in the research study. The participants were studying an intermediate sociology module called Soc3A- Power, Social Order, Crime, Work and Employment as part of the BA (Hons) in Humanities/ BA (Hons) Humanities (Psychology Major).

In the context of the outcomes assessment sector of the catalyst framework for high impact eportfolio practice, our introduction of eportfolio practice is a new element in the development of a programme focused assessment and feedback strategy, which the Humanities programme team has been working on since 2013. The aim of this initiative was to design a systematic programme focused assessment and feedback approach which ensured that students had a reasonable opportunity to meet all of the programme learning outcomes. (Brunton, Brown, Costello, Walsh, 2016) By developing a programme focused approach it would ensure a wide variety of assessment types that were appropriate to the disciplines and had a customised appropriate feedback approach for each assessment.

The development of the programme focused assessment and feedback approach was underpinned by Hassan’s “assessment drives learning” philosophy, coupled with the important role of feedback to the student experience, and that the function of assessment is not just to measure learning but rather that it encourages student engagement and development of learning. (Hassan, 2011) This began by auditing the programme learning outcomes and assessments. Then an assessment and feedback matrix was created for each programme, whereby the assessment was mapped to the modules and to the programme learning outcomes. (See table 1 & 2 below) Now in its fourth iteration and the assessment and feedback matrices have evolved and changed each year and now include varied assessments such as reflections, eportfolios, online discussions, peer review, presentations, research reports and group work. One aspect currently under development, is to shift the focus from assessment of learning to assessment of learning and assessment as learning. (National Forum, 2016)

Table 1: Soc3a Assessment Plan 2016/17

	Assignment 1	Assignment 2	Assignment 3	Assignment 4
<b>Soc3a assessment plan 2016/17</b>				
Type	Literature review	Online Discussion	Reflective eportfolio	Case study
Weighting	10%	20%	20%	50%
Maps to Learning outcomes	1,2,3	4,6,7	5,6,7	1-7

In the sociology module Soc3a, the eportfolio assessment activities were designed following the Catalyst for Learning Framework for eportfolio practice, in particular focusing on the sectors of pedagogy and outcomes assessment and were intended to promote assessment as learning within the module. As part of the module’s assessment design process, we ensured that the new assessment plan which included eportfolio aligned with the module learning outcomes and the programme learning outcomes.

Table 2: Soc3a Module Learning Outcomes 2016-17

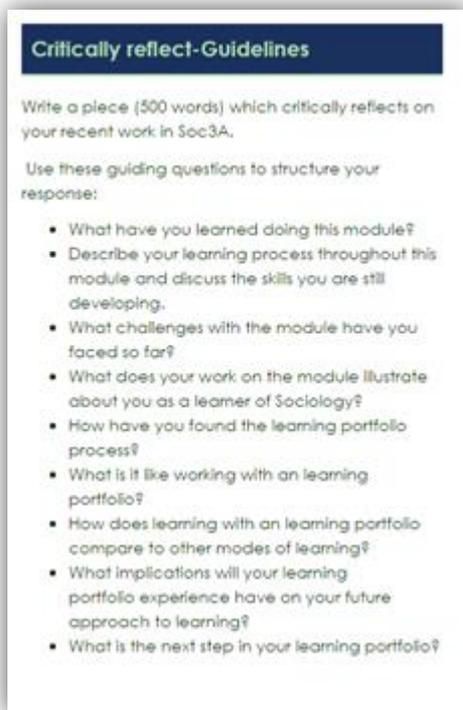
### Soc3a Learning outcomes

On successful completion of this module the learner will be able to:

1. Analyse relevant theories on power with reference to social order.
2. Illustrate how the concepts of the state, civil society and social-order can be understood in Irish society through functionalist, conflict and post-structural perspectives.
3. Contrast the ways in which major sociologists saw social order as a voluntary activity with the perspective which sees social order as created through coercion.
4. Assess the difficulties in coming to an agreed definition of crime, the different theories regarding the causes of crime and the connections between crime, drug use and deprivation.
5. Reflect on their own development as a student of sociology and their approach to learning within the module.
6. Examine the major issues in the sociology ranging from the traditional writings of the founding-fathers of sociology to more modern theorists.
7. Critically reflect on the application of social theory to everyday life.

Following the three Catalyst for Learning design principles of inquiry, reflection and integration for the Soc3a eportfolio assignment in which the participants used their eportfolios to create a critical commentary on their learning in the module, their learning processes, their challenges, being a sociology learner and the experience of learning with an eportfolio. Eportfolio entries follow a prescribed structured template of critical questions intended to encourage reflection about their learning. (See figure 2 below) In this way reflective learning is “critical to helping students connect and make meaning from diverse learning

experiences.” (Eynon & Gambino, 2017, p.40) The critical questions template is modelled on the Facione & Facione critical thinking framework which focuses on six critical thinking skills: analysis, interpretation, inference, self-regulation, evaluation, and explanation. (Facione, 2013) The reflective prompts were designed to encourage learners to link academic learning with life experience, a key element of integrative learning. (Eynon & Gambino, 2017) The critical questions template was not proscriptive but rather as a guide for reflection.



**Critically reflect-Guidelines**

Write a piece (500 words) which critically reflects on your recent work in Soc3A.

Use these guiding questions to structure your response:

- What have you learned doing this module?
- Describe your learning process throughout this module and discuss the skills you are still developing.
- What challenges with the module have you faced so far?
- What does your work on the module illustrate about you as a learner of Sociology?
- How have you found the learning portfolio process?
- What is it like working with an learning portfolio?
- How does learning with an learning portfolio compare to other modes of learning?
- What implications will your learning portfolio experience have on your future approach to learning?
- What is the next step in your learning portfolio?

Figure 2: Critically Reflect guidelines

The learners completed five reflective eportfolio entries of five hundred words over the course of the academic year 2016/2017 at key points in their learning journey. For each entry, learners were asked to provide three pieces of evidence of their learning to support their reflection. Learners were given freedom to include any evidence they felt was relevant and to provide a few lines of context alongside the evidence. (See Figure 3) Learners received formative feedback after the first entry and then summative feedback and a final mark after final submission in April 2017.

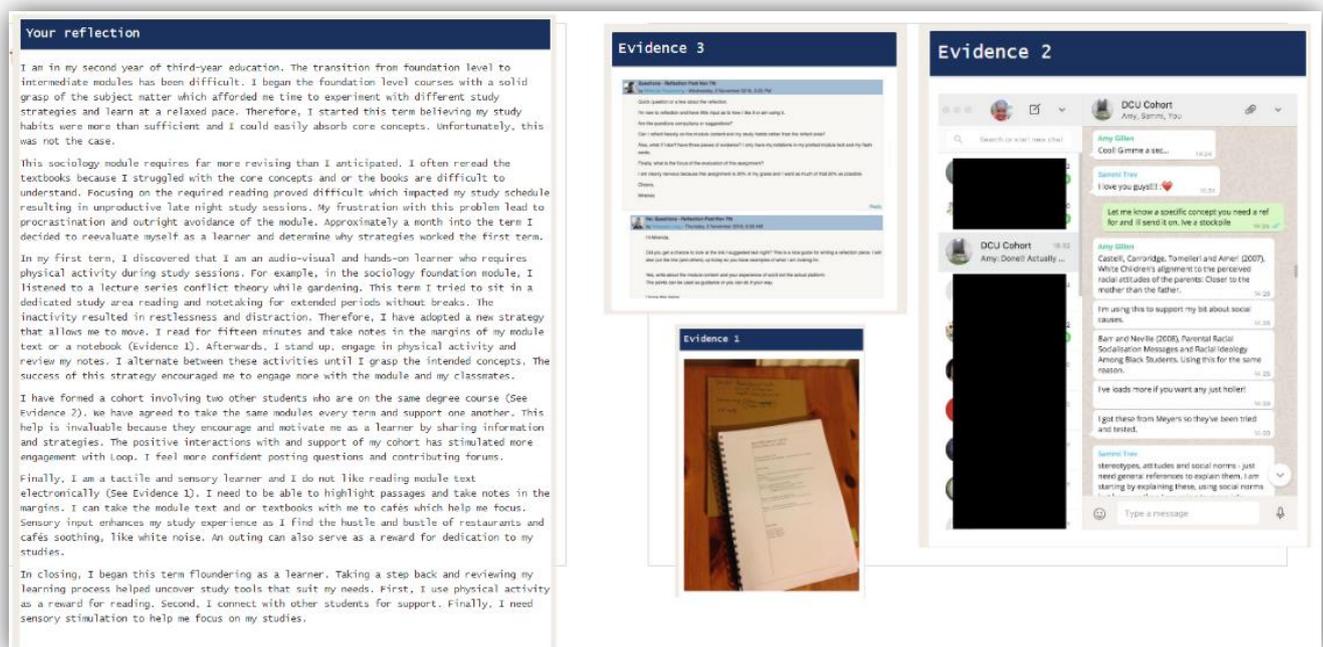


Figure 3: An example of a student eportfolio entry

## Methodology

The project adopts a case study approach, using an exploratory holistic single-case design where the “object of the study” or the single issue the of the learner experience of using an eportfolio and the process of developing critical thinking are investigated.(Creswell 2007, Yin 2014) In order to gain a rich, thick and personal description of the experience of using an eportfolio the following data collection methods were selected; physical artefacts contained in an eportfolio and interviews. The main source of data was the written, visual and multimedia artefacts from the learner’s eportfolios, and the focus of the interviews was the learner’s eportfolios and their experience of the process of learning with an eportfolio.

Participants have used their eportfolios to create a critical commentary of their learning and completed five eportfolio entries over the course of one academic year at key points in their learning journey. Eportfolio entries followed a prescribed structured template of critical questions intended to encourage reflection about their learning.

Within this case study 37 interviews were conducted for an in-depth exploration of the learner experience of using an eportfolio and the development of critical thinking. The participants were interviewed with their eportfolios, written, visual and physical artefacts from the participant’s eportfolios were used as stimulus during the interviews using the technique of “photo elicitation”. (Prosser & Loxley, 2008) Interviews were conducted at two points during the data collection process, at the midpoint and at the end of their eportfolio. The rationale for having two sets of interviews is to explore the learner progress and development in terms of critical thinking and reflective learning and to collect personal description and interpretation of experiences and which enabled me to discover multiple views of the case.

Data analysis was an ongoing process throughout the project, following a circular model of gathering and analysing data, as “coding is analysis”. (Miles & Huberman 1994) The analytical approach for the study was

thematic analysis, which is was used to examine the “nature of eportfolio learning”- the affective, physical and cognitive, a data led approach following the Braun & Clarke six phases of thematic analysis. (Braun & Clarke, 1994)

### **Emergent Findings**

The emergent findings of this study show that an assessment as learning approach using eportfolio had an impact on the learner’s narrative in relation to their critical thinking, their experience of learning, and their identities as learners of sociology. Five key themes were identified in the learner narrative about their experiences of learning with an eportfolio: (a) being an online distance learner, (b) the experience of learning with an eportfolio (c) the application of sociological theory to everyday life, (d) thinking critically in my eportfolio, (e) my approach to learning.

#### **Being an online distance learner**

Participants described the challenges of being an online distance learner in terms of balancing competing demands of family, work and illness, this impacted on their ability to find sufficient time for studying.

“With all the extra pressures of Christmas from a work and family point of view the study can get squeezed. I may have to do less(no?) housework to facilitate my learning this month. This idea has not been negotiated with my partner and may have to be revised! Perhaps a self-imposed ban on TV for the month is a more acceptable strategy. However, all work and no play!” (Participant P)

The experience of being an online distance learner was described as being more isolated than a campus based context, however participants emphasized how the role of peer support, the tutor, tutorials, and online discussion fora enabled them to overcome this sense of isolation.

*“Interviewer: and you talk a little bit about the isolation of self-directed study which definitely is a feature of it*

*Participant I: Absolutely*

*Interviewer: Do you mind the isolation? Do you try and work with other people or?*

*Participant I: Yes, I don't really have the ability to do, I don't make plans like that because you would have to do it in advance, and then if I'm having a bad pain day so I don't want to let people down but we have a WhatsApp study group where we ask each other questions and things, and on Loop (DCU Virtual Learning Environment) we do but we can have a laugh on the WhatsApp group.” (Participant I)*

#### **The experience of learning with an eportfolio**

Participants emphasized the positive impacts of using an eportfolio on their learning with regard to evaluating their progress, engagement with the module, reflecting on their process of learning and for developing self-awareness of their academic development.

*“I feel as I am writing for the reflective eportfolio that I am becoming more acutely aware of how I am progressing as a student and how my learning styles and understanding of sociology in general has changed.” (Participant H)*

The experience of learning with an eportfolio was perceived as very different from other modes of assessment in terms of being personal, informal and having more freedom to express themselves.

*“In this way, the learning portfolio differs in comparison to other modes of learning; in other words, I am not simply learning and regurgitating information, I am also learning about myself.” (Participant L)*

### **The application of sociological theory to everyday life**

The eportfolio provided participants with a place to experiment with new ideas, to apply the sociological theory learned in the module to everyday life, to develop their sociological imagination.

*“The reflective eportfolio has been a useful tool thus far in forcing myself to explore what I think about social power and order and, where I am as an individual in the schema of society.” (Participant I)*

### **Thinking critically in my eportfolio**

Participants described that the module content and learning with an eportfolio had an impact on their critical thinking skills with regard to self-regulation, developing a fuller understanding of the module content, open-mindedness and critical reflection.

*“I have found the learning portfolio process, so far, beneficial as it is not only useful in revising what I have learned but it also has me thinking about what information really appeals to me personally and how the information coincides or does not coincide with my own opinions and beliefs” (Participant L)*

### **My approach to learning**

Personal approaches to planning, learning and study skills were detailed by participants, with regard to their development as learners. Reflecting on their learning prompted participants to try new study techniques and to grow in confidence about their personal approaches to learning.

*“In closing, I began this term floundering as a learner. Taking a step back and reviewing my learning process helped uncover study tools that suit my needs. First, I use physical activity as a reward for reading. Second, I connect with other students for support. Finally, I need sensory stimulation to help me focus on my studies.” (Participant S)*

### **Discussion**

High impact practices, of which effective eportfolio have been shown to increase rates of student retention and student engagement, in this case study learning with an eportfolio was shown to have an impact on student engagement, however it had no impact on retention within the module Soc3a. However, retention was not an issue in the module, which retains on average over the last five years 89% of learners that take the module, this retention rate is above the Irish higher education average retention rate of 85%. (HEA, 2017)

The impact of the eportfolio project on staff was significant, the two tutors teaching the module found the platform easy to use and felt supported academically and technically while engaging in this new practice. They felt that the eportfolio assessment was challenging, interesting and a “huge success”. As a result of the positive feedback from staff and students, on a programme level we are scaling up eportfolio assessment.

For the academic year 2017/18, eportfolio based assignments will be introduced to a further seven Humanities programme modules.

On an institutional level, the 17 pilots had positive impacts in terms of staff and student engagement, retention and integrating the co-curriculum. The Loop Reflect platform was officially launched in May 2017 by the Minister of Education Richard Bruton and in the next academic year 2017/2018, every DCU student, approximately 16,000 students will have a Loop Reflect eportfolio for life.

### **Conclusions**

The most significant lesson learned during this project was that eportfolio practice “when done well” can create a deeply meaningful, integrated, personal and transformative learning experience for learners. Reflecting back on the last year, there are some improvements that we will make for the next cycle of eportfolio practice in the Humanities programmes, firstly spend more time at the start orienting learners to the eportfolio platform. Secondly, give learners more support with reflective writing, learners were uncertain as to how to reflect. For next year, we will develop a resource on reflection for our learners. Thirdly, using the critical questions template with guiding questions really helped scaffold the process for the learners, we will replicate this when scaling up eportfolio practice into further Humanities modules. Fourthly, learners did not know what an eportfolio should or could look like, for the next iteration we will create several model eportfolios to address this. Finally, the eportfolio practice that we introduced into Soc3a, was an individual assessment, it did not have any peer element. One of my key learnings from the Catalyst for Learning Framework is the importance of social pedagogy which “deepens the impact of reflective learning”, in the design of our future eportfolio practice, the inclusion of peers and community will be an important evolution for the future.

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