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Implementing E-Portfolio as an Assessment Tool for Academic Writing in Higher Education

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Abstract

In this study, an electronic portfolio (e-Portfolio) was implemented in lieu of the conventional paper portfolio in an advanced English course at a Malaysian public university. This study aimed to explore the students' use of the e-Portfolio as an assessment tool for academic writing. The implementation of the e-Portfolio involved 48 undergraduates for one semester. This study employed a qualitative approach that consisted of open-ended questionnaires and interviews. The data were imported to NVivo 12 and thematic analysis was used as the primary method of data analysis. A total of 48 students answered open-ended questionnaires and 18 of them volunteered for interview. The findings show that the students responded positively to the emphasised features of the e-Portfolio such as instructor feedback and the use of artefacts. Nonetheless, 13 students perceived the peer review component of the e-Portfolio as a shortcoming. Results from the interview revealed additional strengths of using the e-Portfolio such as accessibility, editability, being able to explore others' e-Portfolios, being able to correct work, and writing stages. The participants also recognised Internet connectivity, difficulty adapting to the tool, and peer criticism as challenges of the e-Portfolio. The study highlights the contributions as well as weaknesses of using the e-Portfolio in the Malaysian higher education context. This will guide practitioners and researchers to better implement the e-Portfolio in tertiary institutions.

Keywords: E-Portfolio, Assessment, E-learning, Academic Writing, ESL

Introduction

Assessment is a quintessential part of education and is historically used to measure an individual's merit. While this purpose remains relevant, methods for assessing learning have transformed and expanded in recent years as a consequence of technology. Information and communication technologies (computers, the Internet, handphones) are now used to deliver and communicate assessment content as well as to collect, manage and report assessment data (Finger & Jamieson-Proctor, 2009). The intersection between technology and higher education is decidedly more prominent as university students are expected to be immersed in a technological environment. Visions for a new higher education system in Malaysia encompass the use of technology-enabled innovations and models for customised learning

(Ministry of Education, 2015). As expressed by Goode (2010, p. 612), “it is simply not possible to avoid technology as a twenty-first century university student”.

This study attempts to encapsulate the 21st century language classroom by incorporating technology in assessment. We saw an indisputable need to transition from paper portfolio to electronic portfolio (e-Portfolio) in an advanced English language course for undergraduates. Apart from the fact that technology is already extensively applied in higher education, academic writing is no longer defined by pen and paper. There is instead a digital emphasis on literacy since students learn through a wide range of resources such as multimodal texts, websites, and presentations (Lirola, 2018). The implementation of the e-Portfolio to assess academic writing in this study is therefore essential as “the proliferation of new information and communication technologies in all areas of contemporary culture is changing the way writing—and subsequently writing education—is conceptualized” (Relles & Tierney, 2013, p.477). In comparison with its paper-based predecessor, the e-Portfolio promises assessment potential for the 21st century because it can include a diversity of digital evidences in the form of audio, video, and textual format and is therefore a catalyst for the story-telling of learning (Finger & Jamieson-Proctor, 2009). Nevertheless, the transition of portfolio from paper to electronic is a process more intricate than just the application of modern gadgets as the integration of technology “should be creatively designed or structured for particular subject matter ideas in specific classroom contexts” (Koehler & Mishra, 2009, p.61). The development of the e-Portfolio in this study involved prior planning and testing to ensure that the assessment tool operates as intended. Following the implementation of the e-Portfolio, the aim of this study is to investigate the students’ experiences of using it as an assessment tool.

- The objective of this study is to explore the contributions of the e-Portfolio towards the students’ academic writing skills in an advanced English course.

Literature Review

The flexibility of the e-Portfolio is demonstrated through its use in varying subjects: for the professional development of preservice teachers (Oner & Adadan, 2016; Shaltry et al., 2013; Wang, 2009), with a focus on English as a Foreign Language (Aydin, 2014; ; Al-Hidabi et al., 2020; Ma’arif et al., 2021), and for assessment (Giuntini & Venturini, 2014; Guzeller, 2012; Muin, 2021). Studies have shown that e-Portfolios foster collaboration (Wang, 2009), promote ownership of learning (Hewett, 2004), improve English language proficiency (Aydin, 2014; Muin & Hafidah, 2021), develop reflective thinking skills (Oner & Adadan, 2016), improve academic achievement (Guzeller, 2012) and written communication (Giuntini & Venturini, 2014). The use of e-Portfolio for English language assessment in secondary school context showed that students were able to monitor their learning progress and demonstrate autonomy over their work (Ma’arif et al., 2021). In the higher education context, students who used e-Portfolio as an alternative assessment tool demonstrated improved subject knowledge and digital pedagogy (Makokotlela, 2020) and improved writing skill (Misdi, 2020). When implemented with the relevant purpose and features, the e-Portfolio has the potential to be more than a storage space (Krause, 2006).

e-Portfolio for Assessment

A portfolio with a focus on assessment should include learner accomplishments and formal and informal learning prospects (Rossi et al., 2008). The use of technology-enabled portfolio resonates with the Malaysia English Assessment, a framework that calls for the assessment

of university students' English language proficiency through various contexts (formal and informal) and online resources (Ministry of Higher Education, 2017). Portfolio assessments that are formative enable learners to reflect on their learning progress and styles that in turn lead to further development of learning (Rossi et al., 2008). The e-Portfolio in this study similarly focuses on students' learning process through an enhanced assessment experience.

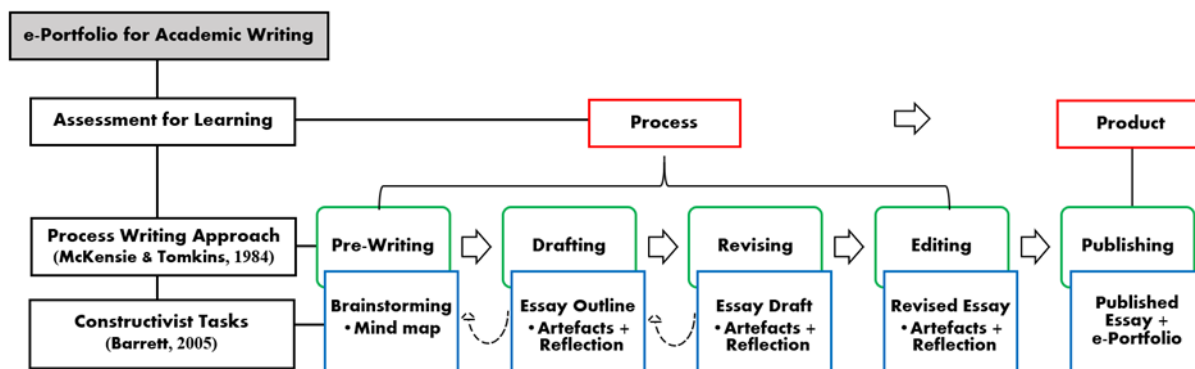


Figure 1 e-Portfolio Framework (Source: Ngui et al., 2019)

Figure 1 depicts the e-Portfolio framework with the integrated components of assessment for learning, the process writing approach, and the constructivist theory. A key aspect of assessment for learning lies in the descriptive feedback that students can use to improve their work (Stiggins & Chappuis, 2006). The digital nature of the e-Portfolio enables real-time feedback to be communicated by instructors and even peers as it can be easily shared on the Internet. In relation to this, the process writing approach advocates for writing to be done in stages (McKensie & Tomkins, 1984); therefore, prompt communication of feedback will in turn allow students to use feedback to revise their academic writing from one stage to the next. The e-Portfolio writing stages in this study consist of prewriting (mind map), drafting (essay outline), revising (full essay draft), editing (revised final essay), and publishing (published essay and e-Portfolio). The process writing approach is fitting for second language learners as there are opportunities for revision, minus the apprehension of having to produce a finished essay promptly (Brown, 2001). With the incorporation of assessment for learning and the process writing approach in the framework, there is a synonymous emphasis on learner progress and academic writing improvement using the e-Portfolio.

By anchoring the e-Portfolio to the theory of constructivism, the assessment tool takes on a learner-centred approach since the theory acknowledges that the learning experience must be made meaningful or relevant to the students in order for them to learn new things (Glaserfeld, 1995). Students select from a wide range of artefacts (digital learning evidences) on the Internet such as news and journal articles, images and texts, and audio and video files, and upload the artefacts that they find meaningful and relevant in their e-Portfolios. Learners should provide reasons as to how the artefacts they have selected in their e-Portfolios are representative of their learning (Barrett, 2005). This amplifies the opportunities for learners to personalise and construct e-Portfolios based on individual perspectives and experiences.

Based on the framework, the emphasised features of the e-Portfolio in this study are instructor feedback, peer review, and artefacts. All the features are enabled via the applications involved in the assessment: Google Sites to create the e-Portfolios, and Google Docs to compose the essays. The links to the e-Portfolios are shared via the Internet which allows instructors and course mates to view the e-Portfolios and leave feedback directly on

the essays. Through Google Sites, students can post links or upload artefacts that include news and journal articles, images and YouTube videos, and other digital resources that pertain to their academic writing. The emphasis on the aforementioned features promotes students to play an active part in assessment and use the process for learning. On the whole, the e-Portfolio capitalises on technology to provide an enhanced assessment experience that surpasses its paper-based predecessor.

Research Methodology

This is a qualitative case study that investigates the experiences of the participants to uncover their use of the e-Portfolio as an academic writing tool. The study was conducted in an advanced English course (UB00402 Academic Reading and Writing) that is offered to undergraduates who attained Band 3 and above in the Malaysian University English Test (MUET). To complete the 14-week course, students are required to undertake a series of assignments; one of the which includes the completion of an individual e-Portfolio. Briefing of the course assessments commence in the third week of the course and students are expected to publish complete e-Portfolios in the last three weeks of the course. Purposive sampling was employed by selecting students who were enrolled in the course from two different classes. The classes consisted of 48 students (23 in Class A; 25 in Class B) from the Faculty of Engineering, Faculty of Social Sciences and Humanities, Faculty of Food Science and Nutrition, and Faculty of Science and Natural Resources.

The open-ended questionnaire conducted was distributed in the final week of the course and the interview was conducted after the course ended, at an agreed time with the participants who volunteered. All the collected data were transferred into Microsoft Word files and imported to NVivo 12 for analysis. The data were then analysed using thematic analysis with reference to Braun and Clarke's (2006) guidelines.

Findings

The findings of this study are presented based on the two data sources namely the open-ended questionnaire and the interview. Table 1 shows the findings from the open-ended questionnaire whereby the respondents described their experiences in relation to the emphasised features of the e-Portfolio.

Table 1

Students' Perceptions towards Emphasised Features of the e-Portfolio

Features	Class A	Class B
Instructor Feedback	<ul style="list-style-type: none"> • Made aware of errors/weaknesses • Made corrections • Improved academic writing • Made aware of level of performance • Motivation 	<ul style="list-style-type: none"> • Made aware of errors/weaknesses • Made corrections • Improved academic writing • Made aware of level of performance
Artefacts	<ul style="list-style-type: none"> • More information/new knowledge • Better understanding for writing task 	<ul style="list-style-type: none"> • More information about task • Enhanced understanding of topic • Used artefacts as supporting information for writing task

		<ul style="list-style-type: none"> • Engaged readers
Peer Review	<ul style="list-style-type: none"> • Biased comments • Preference for instructor feedback • Able to explore peers' work • Opinions from peers 	<ul style="list-style-type: none"> • Biased comments • Lack of critical comment • Preference for instructor feedback • Able to explore peers' work • Opinions from peers

All the students demonstrated positive experiences with instructor feedback. They felt that feedback enabled them to be aware of their errors and weaknesses in academic writing. This then allowed them to revise their work and in turn they expressed a sense of improvement in their academic writing. The students were also aware of their performance in academic writing and experienced motivation to perform better in academic writing.

Students from Class A and B responded positively towards the inclusion of artefacts in the e-Portfolio. They expressed that the artefacts enabled them to retrieve more information related to the academic writing task, to understand the task and topic better, and to support their writing. The students also demonstrated awareness for the audience and felt that the artefacts made the e-Portfolio more engaging to readers.

A total of 13 students (six from Class A and seven from Class B) attributed the peer review with negative experiences. The students expressed that some of the peers acted in a biased manner such as being overly lenient or strict when reviewing. Other reasons include preference for instructor feedback and the perception that comments from peers were not critical enough. On the other hand, the rest of the students responded positively towards peer review because they were able to read their peers' work and obtain comments from their peers.

The findings from the interview reveal more comprehensive details and contributions of the e-Portfolio as an assessment tool. Interview excerpts are included in this section to demonstrate the findings; the respondents are coded with the letter "A" or "B" with reference to their class. Ellipses in the excerpts indicate pauses during the speech.

Accessibility

"Since we can just access it everywhere. Since the changes are all saved in the Google drive, right? So... I think it is much better than using the offline apps. Such as Microsoft Office Word and... Yeah. I think that's the reason I like it." – A2

"Flexibility? I mean if I do my assignments on the e-portfolio, I don't have to... Take my time to see my lecturers. My lecturers can also like comment from my work in the... on the e-portfolio. So, it saves time and also energy." – B9

Editability

"Because I think I... It easy for me to edit the essay." – A6

"Some of it is, I like editing. Maybe... Maybe because the editing. I love to edit something and some part of it is... It is easier for me to add something, like for example, Youtube links and ither article." – A1

Instructor Feedback

“Because in the e-portfolio the comment that... Lecturer can comment our essay and it helped me to improve my academic writing such as my grammar.” – A6

“When I read back all... All the comments that I received, “Oh!”. Then I thought “Oh! Actually if I do it like this, should have write it like that and made some typo errors and grammar mistakes, such as that. If... If I didn’t get those comments, I don’t think I would improve.” – A8

“By the comments from the lecturer, I can know which part that I have to improve more and then I can find like examples in the website and then try to apply it in the e-portfolio.” – B9

“Once we submit it online and our lecturer can mark it on time and... By the time he or she mark, and we would be able to check what our marks and also the mistake we have done. Instead of like if we submit it on paper, then we still have to wait for one or two weeks.” – B5

Artefacts

“In e-portfolio I usually like artefact. Because in artefact I can impress my feeling. I can relate my real life. Then I think, in that part I can improve my writing.” – B8

“By using this medium, I can express my work be more... To be more... To be more creative in this and by... By using this medium, we as a student can put the... Youtube... Youtube and picture and journal. So, this medium very helpful.” – B3

“Because may have other video, image. So that helps to... Helps the reader to understand more. Yeah. Your topic. So, it actually helped. Helped others... people to understand your own writing.” – A9

Ability to Explore others’ e-Portfolios

“The e-portfolio is open to everyone. So, I can also refer to the people who has highest score.” – A4

“Like I can... Like review my course mate. Yeah, my friends’ essay. So maybe sometimes I can... Get some idea from... Yeah. That’s it, and improve my vocab.” – B7

Ability to Correct Work

“Because if we are not using the e-portfolio, maybe I can only submit my work... Once only and I don’t have the convenience to... Correct my mistakes. So, I think, using the e-portfolio you can tell all my mistake and then I can resubmit it again. So, I think it’s quite a good one.” – A2

“It gives you time to rectify mistakes before you go into the next stage. Yeah. I think it’s actually quite good. Before you develop your main idea... Your core idea.” – A9

“Other people can read it or correct my mistake. So, I can learn from my mistake also.”
– A4

Writing Stages

“Because the e-portfolio, like guidelines for me how to do... essay. A very good essay. Because in that e-portfolio got a draft, outline, all right? So, it’s like a guideline for me... Like I said before this, it got a lot of stages. So, whenever I did mistakes and then Ms. W corrected it right? So, then I corrected myself and then I correct my mistakes in upcoming ... I mean ...stages in the essay.” – B4

Internet Connectivity

Because I live in a rural area. So that line problem at my... At my home. So, I have to redo this outside... My village.” – A7

“The e-portfolio always stuck. It must use high... High stream Wi-Fi. If you don’t have... If you have low Wi-Fi, it might be stuck and your e-portfolio make it trouble.” – B8

“Because at my hostel don’t have a strong internet connection. So, I feel a bit difficult to edit my essay.” – B4

Difficulty Adapting to the e-Portfolio

“At first especially at first, when I first... introducing. It’s a bit confusing like where should I find my work?” – B7

“Maybe... in designing the pages? Because it requires like so many... And we choose and also buttons that I have to understand like... And then... On sharing the e-portfolio?” – B9

Peer Criticism

“People used the marks to compare with each other. So sometimes some people say: Oh! Your marks are very low, so your standard is very low.” – A4

Discussion and Conclusion

This study reveals the positive impact of using the e-Portfolio for academic writing. The students improved their writing performance as a result of receiving instructor feedback and including artefacts in their e-Portfolios. This is similar to the results of another study in which the e-Portfolio was also implemented as an assessment in tertiary education. The study used Edmodo-based e-Portfolio and reported improvement in the participants’ writing skill, attitudes and critical writing (Misdi, 2020). On the other hand, this study identified challenges with regard to peer review and the technical aspects of using the e-Portfolio such as Internet connectivity and adapting to the e-Portfolio. The findings are consistent with an e-Portfolio study that reported mixed responses from the students regarding the effectiveness of the tool for learning English (Muin & Hafidah, 2021). In another study, it was revealed that while the use of e-Portfolio promoted feedback and improved ICT skills, the students also cited lack of time, inadequate ability to use the e-Portfolio and limitations of infrastructural facilities as challenges (Al-Hidabi et al., 2020).

The findings of this study suggest that the implementation of e-Portfolio as an assessment tool with an emphasis on writing progress has a positive impact on second

language learners in the higher education context. The participants in this study improved their academic writing as a result of the feedback they received from their instructors and the artefacts they incorporated in their e-Portfolios. Additional benefits as cited by the participants include accessibility, editability, being able to explore others' e-Portfolios, being able to correct their work and writing stages as strengths of the e-Portfolio.

This study proves that the e-Portfolio framework is aligned with the aim of developing students' academic writing skills through assessment. The incorporation of assessment for learning, the process writing approach, and the theory of constructivism in the e-Portfolio framework allow students to continuously improve their academic writing as part of assessment. The findings of this study contribute to the existing literature with regard to the use of e-Portfolio especially as an assessment tool in the second language context. The information can be useful for instructors who seek to transform language assessments or to introduce new tools in the second language classroom in the form of e-Portfolio. Researchers and practitioners are also able to better develop and implement e-Portfolios for tertiary education based on the results of this study. In essence, the use of e-Portfolio in this study demonstrates that assessment does not necessarily have to be a rigid and tedious experience. The renewed focus on assessment contributed to an enhanced assessment experience for the students.

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