

Designing an e-Portfolio Framework for Academic Writing of Second Language Learners

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Article Information

Received 29 April 2019
Received in revised form 8 September 2019
Accepted 10 October 2019

Abstract

Technology has transformed assessment by multiplying the methods as well as resources that can be used to measure learning. One such transformation is the e-Portfolio, an innovative tool that catalyses the sharing of work and the inclusion of digital evidences. The use of e-Portfolio to assess academic writing among undergraduate students in Malaysia provides enhanced testing and learning opportunities. This study therefore aims to design an e-Portfolio framework that aligns with the current aspirations for higher education in Malaysia, paving the way to a more contextualised and sustainable form of assessment for English Language courses. To design the framework, relevant concepts, models and frameworks in the past studies, ranging from the year 2000-2018 were reviewed. Relevance was determined based on application in higher education and in the ESL context. The data were imported to NVivo 12, and content analysis was employed as the primary method of data analysis. Using an inductive approach, concepts and theories regarding assessment, academic writing, and learning were merged to form the e-Portfolio framework. Based on the analysis, the proposed e-Portfolio framework has footing in assessment theory for learning, process writing approach, and the theory of constructivism. This framework prescribes that by using the e-Portfolio as an assessment, instructor and peer feedback can be better communicated, revision can be easily done, and a wide range of authentic and multimedia resources can be included. Overall, this leads to an improved emphasis on learner involvement and progress when being assessed.

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Keywords: Academic writing; Assessment; Constructivism; e-Portfolio; Process writing

INTRODUCTION

In Malaysia, education remains a priority as the country strives to produce holistic individuals who can contribute to its development. In accordance to this, the Malaysian government has included technology as an essential aspect of teaching and learning as well as e-learning, which has become an integrated component across Malaysian higher learning institutions (Ministry of Education, 2013a). Since teaching and learning is essentially related to testing, technology has also played a role in assessment. In a guide titled *National e-Learning Policy: Higher Learning Institutions*, the Ministry of Higher Education (MoHE) (2011) cited assessment as one of the key aspects for the development of curriculum and e-content phases, with the initial stage to include activities involving e-assessment (year 2011-2012), while the subsequent stage to witness an increase in e-assessment related activities (year 2013-2014), and for e-assessment to be fully implemented eventually (year 2015 onwards).

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Assessment is an integral part of teaching and learning, without which educators would be unable to measure the product of their teaching. Reeves (2006) however noted that university instructors have a tendency to misalign assessment by selecting an undemanding evaluation method instead of measuring what is crucial. This concern is similarly expressed in a study conducted in a Malaysian university which stated that assessment is perceived as a measurement of how much learning is done instead of how much help is needed (Lee, Azman &

Koo, 2010). The researchers further expounded on the need for descriptive feedback on written assignments - a need commonly overshadowed by the assigning of a conclusive grade. This is equally if not more critical in language related courses whereby guiding students to improve as part of assessing should be a priority. A review that explored the causes of low English language literacy among Malaysian students noted that the present education system hinders students from becoming autonomous learners due to the “teach to the test” syndrome (Musa, Koo, & Azman, 2012). The review subsequently called for the need to re-evaluate the present practices in the English language classroom.

Seeing that academic writing is an indispensable skill in university, Malaysian educators have attempted to revolutionise the subject by introducing elements of collaboration (Shafie, Maesin, Osman, Nayan & Mansor, 2010), implementing collaborative multiple-drafting (Rafik-Galea, Arumugam & Mello, 2012), and using an e-learning portal to support students’ writing needs (Said & Lee, 2014). However, the gap remains as there appears to be a lack of emphasis on the concurrent role of assessment in learning. Recognising the interdependent link between learning and assessing in English language courses, MoHE proposed Malaysia English Assessment (MEA) which delineates an ‘ecosystem’ that can be used to measure university students’ English language proficiency (Mustafa, 2017). MEA lays the groundwork for instructors to recognise that assessment should take place across various contexts (formal and informal) and by means of various resources (MoHE, 2017). Similarly, this study attempts to highlight the link between learning and assessment in the English language classroom by designing an e-Portfolio (electronic portfolio) framework that could contribute to the English language proficiency of university students in Malaysia.

Despite being a common form of alternative assessment, portfolios are typically associated with bulky sizes and heavy weights. Apart from the limit in physical storage capacity, portfolios also generally consist of paper-based materials, making it increasingly obsolete in the modern-day classroom. When enhanced by technology, the e-Portfolio transcends the manual portfolio in aspects of portability, accessibility, and storage. The ability to include digital evidences such as links, online articles, and multimedia files also makes the e-Portfolio more relevant since such resources are now vastly available and rapidly circulated. As such, using an e-Portfolio can lead to a more engaging, sustainable, and flexible means of measuring learner progress in language classrooms.

Language outputs such as writing and speaking are generally emphasised when assessing language proficiency. Considering the magnitude of such assessments, it is only fitting to ensure that learners’ motivation and progress are wholly considered when measuring proficiency. In this study, an attempt to design an e-Portfolio framework to assess academic writing is made with the awareness that a timely review of assessment methods will benefit the learners. This innovation is in line with the government’s call for a unified shift towards ICT in the education scene (Ministry of Education, 2013a, 2013b). Furthermore, the Malaysian Ministry of Education has also decided to conduct a trial run on e-Portfolio in ten secondary schools commencing the year 2019 (Chin, 2018), thus reflecting the ministry’s desire to integrate e-Portfolio as part of the formal education system. As such, the present study is opportune and likely to benefit other academicians and researchers who are keen to explore e-Portfolio as an educational tool.

LITERATURE REVIEW

2.1 e-Portfolio

The convenience offered by rapidly evolving technology has transformed assessment methods such as paper-based portfolios into e-Portfolios in the present day. An e-Portfolio comprises an individual or a group of people’s collections of evidence in demonstrating their abilities and attainments that can be stored on a

website or in a portable storage device such as a CD-ROM or DVD-ROM (Lorenzo & Ittelson, 2005; Challis, 2005). This collection contains “artefacts” such as images, audio and video files that relate to the learning goals, all of which reflects the learners’ progress over a period of time (Challis, 2005; Krause, 2006; New Zealand Ministry of Education, 2011). Since e-Portfolios are also more portable and easily accessible, this means that data and evidence related to assessment can be distributed effortlessly and widely to stakeholders with an interest in learners’ language competency (Stannard & Basiel, 2013).

Greenberg (2004) believed that opportunities offered by the use of e-Portfolios include authentic assessment and lifelong e-Portfolios. He elaborated that e-Portfolios benefit assessments in numerous ways as they offer alternatives and flexibility as compared to conventional examinations. Ali (2005) analysed e-Portfolio in the language classroom, and advocated that the advantages are numerous as it stimulated learners’ interest, helped to improve language, allowed wider involvement among peers and other potential readers, and presented authentic opportunities for assessment since its digital component is representative of the learning and employment setting nowadays.

Research on the implementation of e-Portfolio for the purpose of assessing academic writing in a formative manner is however limited in the Malaysian context although some preliminary studies have been conducted thus far. Some studies looked at the implementation of e-Portfolio in general such as Mohamad, Embi and Nordin (2015) who explored readiness to adopt e-Portfolio among undergraduate students from three faculties, while Abd-Wahab, Che-Ani, Johar, Ibrahim, Ismail and Mohd-Tawil (2016) reviewed the rubric criteria of e-Portfolio by comparing six American universities. Researchers have also explored e-Portfolios in relation to graduate skills for instance Hafizan, Duggan, Tracy and Scott (2015) who investigated the potential for implementing e-Portfolio in Technical and Vocational Education Training (TVET) while Khoo, Maor and Schibeci (2011) used e-Portfolio to enhance the graduate attributes of engineering students. Other studies are related to the field of English, for example Nambiar and Melor (2017) implemented e-Portfolio as part of the reflective practice of Teaching English as a Second Language (TESL) undergraduates, while Mazlan, Khoo and Jano (2015) illustrated an e-Portfolio conceptual framework to enhance written communication skills in English among undergraduate students. In addition, e-Portfolios have also been used to support the professional development of pre-service teachers (Muhammad Kamarul, 2016). The studies conducted thus far indicate an interest to explore the use of e-Portfolio as a teaching and learning tool in Malaysia. Although preliminary, these studies lend insight into the implementation of e-Portfolio as a tool for assessing academic writing.

2.2 Assessment for Learning

Assessment is an indispensable part of teaching and learning as it informs the instructors and the learners of the extent to which learning has occurred, and it sheds light on aspects which can be further improved. Coffin, Curry, Goodman, Hewings, Lillis and Swann (2003) noted the distinction between formative and summative assessments in writing. According to them, formative assessment functions to teach and contribute to improvement whereas summative assessment is attributed with formal scores. Formative assessment aims to provide constructive feedback and therefore functions as a valuable teaching tool.

Stiggins (2005) made a further distinction between formative assessment and assessment for learning (AFL) by stating that the former emphasises frequency whereas the latter is about continuity; formative assessment informs teachers of learners’ progress while AFL informs learners about their own progress. Formative assessment also reports the achievers and non-achievers whereas AFL relates learners’ development towards fulfilling standards in the process of learning so as to allow opportunities for improvement.

The notion of AFL is therefore a guiding point for all educators and researchers whereby the ultimate purpose of assessment is twofold: to measure and to improve students’ learning. Stiggins and Chappuis (2006) stated that AFL involves translating general standards into classroom-level targets followed by well-aligned assessments with the instructions. What success entails is made explicitly clear to the students from the beginning by providing examples of good and weak work. Ample opportunities should be provided for descriptive feedback (constructive comments that can further guide learning) in order to improve. As a result, in the long run students would take responsibility for their own learning by self-assessing their work and

establishing upcoming goals. The reason that current classroom practice lacks emphasis on AFL is because the notion is not explicitly taught in any form of teacher training programme (Stiggins, 2005). As a result, classroom assessments remain as detached responsibilities for instructors, feedback given may not aim at encouraging improvement, and students are on the passive end of the assessment process.

2.3 Academic Writing

At tertiary institutions, writing is a universal and significant channel for communicating disciplinary knowledge (Coffin et al., 2003). Genres of academic writing include essays, reports, journals as well as thesis or dissertations (Brown, 2004). Undergraduate students are expected to write in a concise, objective, and critical manner in addition to demonstrating abilities to paraphrase, summarise, and cite references. Apart from the fact that the conventions of writing for academic purposes are distinctively different, doing so in the students' non-native language makes the task even more challenging. Brown (2004) expressed that the mastery of writing even in one's own native language may prove difficult and thus more demanding for non-native speakers.

Studies in Malaysia have examined issues related to academic writing in tertiary education (Shafie et al., 2010; Badiozaman, 2015; Musa, Koo, & Azman, 2012) and acknowledged the fact that mastery of English in an academic context is a delicate and challenging task for Malaysian undergraduates. Shafie et al. (2010) looked into the difficulties faced by beginner writers using collaborative writing for the course 'English for Academic Purposes' in tertiary education; they discovered weak language proficiency, more specifically due to the use of first language as one of the challenges faced by the respondents. Badiozaman (2015) studied students' self-concept in academic writing and concluded that various intrinsic (personal beliefs and perceptions about academic writing and English language) as well as extrinsic factors (educational policies and institutions) contribute to second language learners' self-concept. Musa et al.'s (2012) review indicated that students struggle with academic writing since the mode of literacy contrasts with the demands in secondary education, causing certain students to demonstrate poor ability to analyse academic articles and write according to academic conventions in tertiary education. The aforementioned studies indicate that academic writing is a general challenge for second language learners in Malaysia.

2.4 Process Writing Approach

Instructors traditionally pay a great deal of attention on the written product with an emphasis on the extent to which the essay adheres to the prescribed structure and style, urging students to base their work on model essays (Brown, 2001). Product-oriented approaches in the language classroom therefore lean towards writing tasks in which "the learner is engaged in imitating, copying and transforming models of correct language" (Nunan, 1991, p. 87). However, it later became apparent to instructors that writing is "a demanding, intellectual process" (Murray, 1972, p. 11) and "a thinking process" (Brown, 2001, p. 336), therefore classroom pedagogies had to be re-examined. The acknowledgement of the procedural aspects of composing has led to the formation of the process approach in writing. Over time, a series of writing procedures such as prewriting, writing, and rewriting (shown in Table 1) have been introduced (Murray, 1972). According to Murray (1972), the stages in Table 1 are not fixed, instead they are generic phases that many writers experience when composing, and the process is iterative for certain writers.

Table 1. Three Stages of Process Writing.

Stages	Details
Prewriting	Prior to first draft. Writer is aware of topic, audience, and form of writing. Writer conducts activities such as making notes, writing outlines, researching etc.
Writing	Producing of the first draft. Ongoing work that may indicate the writer's knowledge and progress.
Rewriting	Involves activities such as researching, rethinking, redesigning, rewriting, and editing that aim to improve the product.

Note: Adapted from Murray (1972).

Based on the process writing approach, McKensie and Tomkins (1984) also proposed that evaluation of students' writing should therefore shift to focus on the writing stages instead of the conventional evaluation of the end product. They elaborated that the evaluation can include stages of prewriting, drafting, revising, editing, and publishing (shown in Table 2).

Table 2. Integrated Evaluation Checklist.

Stages	Checklist
Prewriting	Can the writer identify the specific audience? Does this awareness affect the choices the writer makes when writing? Can the writer identify the purpose of the writing task? Does the writer vary the register according to the purpose? Does the writer write about a subject related to his/her personal experience? Does the writer engage in activities such as brainstorming, reading, drawing, note-taking, thinking etc. before writing?
Drafting	Does the writer have rough drafts? Does the writer focus on content instead of mechanics in the rough drafts?
Revising	Does the writer share and discuss his/her writing in groups? Does the writer respond to his/her classmates' writing? Does the writer revise his/her work as a result of feedback from the instructor and classmates?
Editing	Does the writer proofread his/her own work? Does the writer help his/her classmates by proofreading their work? Can the writer recognise more of his/her mechanical errors?
Publishing	Does the writer publish his/her final work in an appropriate manner? Does the writer share the final product with the right audience?

Note: Adapted from McKensie and Tomkins (1984).

Table 2 shows the Integrated Evaluation Checklist which instructors can use to evaluate students' writing at any level, and students can also be trained to use the list as a form of self-evaluation. The recognition that writing results from deliberate stages of composing has led to writing activities that focus on the process: brainstorming, structuring ideas, peer-reviewing, revising and editing to ensure accuracy of language and meaning, and publishing of the final work. According to Brown (2001), the writing approach is fitting in the second language classroom because it provides learners with the opportunity to write and think. Hence, this could potentially be more encouraging for writers who are apprehensive about the direct submission of a written product for grading. To address the writing challenges of Japanese undergraduates of STEM (Science, Technology, Engineering and Mathematics) majors, Fukunaga (2018) proposed for progressive writing stages to be incorporated in an English writing e-Portfolio with the aim to support and emphasise on the progress. In Malaysia, the process writing approach is proven to be applicable as researchers have implemented the approach in ESL studies involving tertiary students. Examples include using Paragraph Punch to teach writing (Melor, Hadi & Norazah, 2012) and creating a writing portal for pre-service teachers (Noraini & Lee, 2014).

2.5 Constructivism

The basic definition of constructivism revolves around the notion that knowledge is the result of the learner's own construction of meaning (Hein, 1991), and this knowledge is therefore adaptive in nature given the fact that each individual has varying interpretations (Glaserfeld, 1995). This theory is in contrast to early and more conventional ones that gave emphasis to rote learning (Glaserfeld, 1995) as well as the idea that knowledge is transferable from one to another (Hirtle, 1996). Glaserfeld (1995, p. 4) stated that "to the

constructivist, concepts, models, theories, etc., are ‘viable’ if they prove adequate in the contexts in which they were created”; and asserted that the learning experience must be made meaningful or relevant to the students in order for them to learn new things.

The theory further expanded to the inclusion of those external to oneself in the process of learning, leading to the coining of a new and more specific branch of constructivism known as ‘social constructivism’ by Vygotsky (1978). This notion builds on the foundations of constructivism but emphasises the social component of learning, namely the idea that communication is an indispensable part of learning as one uses language to continuously construct ideas, leading to the formation of one’s identity in relation to the culture and community one belongs to (Hirtle, 1996). Halliday (1993, p. 94) also stated that “language is the essential condition of knowing, the process by which experience becomes knowledge”. In this regard, learning is essentially a social act as it is through speech that learners make meaning and connections of the surrounding world.

An e-Portfolio reflects constructivism as it provides opportunities for learners to express themselves meaningfully and to convey individual experiences via artefacts (Barrett & Wilkerson, 2004). To achieve this, learners have to communicate reasons for selecting artefacts that are representative of their writing. Proof of learning can be indicated by the learners’ justification as to how artefacts displayed in their e-Portfolios represent attainment of goals and objectives (Barrett, 2005). Krause (2006) similarly believed that the process of collecting artefacts to demonstrate one’s subject knowledge or skills makes the e-Portfolio a valuable tool for reflective practice.

METHODOLOGY

Prior to implementing an e-Portfolio, it is important to propose a structure encompassing relevant concepts and theories. Challis (2005) cautioned against the mere archiving of artefacts as it renders the e-Portfolio to be incoherent and too simplistic. Furthermore, e-Portfolios are also now coined and categorised for example, Showcase e-Portfolio, Structured e-Portfolio, and Learning e-Portfolio (Greenberg, 2004) as well as e-Portfolios for students, teachers, and institutions (Lorenzo & Ittelson, 2005). The groundwork therefore is for instructors to design an e-Portfolio that befits a specific purpose and context.

A conceptual framework is a merging of related concepts, designed to elaborate or forecast a phenomenon so as to shed light on the study or area of interest. One may rely on existing theories as well as empirical evidence to come up with a synthesis of concepts pertaining to the research context, especially when a single theory proves insufficient to narrate the entire research; this is especially true in social sciences whereby several theories may be needed to describe a phenomenon (Imenda, 2014).

In order to come up with a conceptual framework for the e-Portfolio in this study, a qualitative research method was applied. Qualitative research possesses certain flexibility to explore a strange new phenomenon or to have a better understanding of familiar topics (Strauss & Corbin, 1990). This is important since research on the use of e-Portfolio in Malaysia, particularly with regard to the assessment of academic writing is still relatively novel. Furthermore, Gray (2009) explained that it is possible to use qualitative methods prior to testing any variables and concepts using quantitative methods. Data analysis in qualitative studies involves combing through and dividing the data into smaller components to form emerging relationships and concepts.

3.1 Research Method

In order to design an e-Portfolio framework for academic writing, document analysis was used as the primary research method. This method applies an organised method in examining and analysing documents that contain words and images in which these documents may be available in print as well as electronic format. They also comprise resources that are official, informal and also academic (Bowen, 2009). Labuschagne (2003) explained that data obtained using document analysis is then categorised into primary themes, categories and case examples through content analysis. Content analysis involves the identification of unique characteristics in an unbiased and organised manner in order to make inferences about textual data (Gray, 2009). Considering the wide array of available literature, the use of NVivo version 12, a qualitative

data analysis computer software package was deemed necessary to ensure that the process of categorising data was conducted meticulously and systematically (Hilal & Alabri, 2013).

To design an e-Portfolio framework, literature with an emphasis on e-Portfolio, assessment, and academic writing were first reviewed. The literature encompassed books, journal articles, government policies, and other research publications. Then, literature containing relevant concepts and models were identified and imported to NVivo 12. Relevance was determined based on two criteria: (i) application in tertiary education (ii) and application for English as a Second Language (ESL) context. Apart from that, only publications from the year 2000 and onwards were selected to ensure the applicability of the concepts in the present study. The literature were subsequently classified and coded into concepts of (i) assessment, (ii) academic writing, (iii) and learning theory. Having analysed the content, the emerging themes were assessment for learning, the process writing approach, and the theory of constructivism. Although the concepts related to different disciplines, they shared certain synonymous values and were therefore complementary with one another. Finally, based on the researcher’s understanding of the subject, the concepts were merged into a framework. As such, the e-Portfolio framework was designed using an inductive approach.

FINDINGS

Drawing from the literature review, an e-Portfolio conceptual framework for academic writing (as shown in Figure 1) was designed with integrated components of AFL, the process writing approach and the theory of constructivism. The process writing approach is based on the five stages proposed by McKensie and Tomkins (1984) whereas the constructivist component to integrate artefacts and reflection is founded on Barrett’s (2005) work.

Figure 1 depicts the e-Portfolio conceptual framework. The framework illustrates how the different concepts and theories merge to form an e-Portfolio that caters to the complexities of learning English in a second language environment. Since feedback is a key component of AFL, the e-Portfolio informs the learners of their progress to help them improve apart from measuring performance. Through the e-Portfolio, writing and submitting work digitally enables instantaneous feedback thereby prompting efficient communication between instructor and student. Providing peer feedback is also easier since sharing online is more efficient as compared to passing around a folder. When feedback is promptly conveyed, this in turn opens up possibilities for the learners to communicate further about their progress. Using the e-Portfolio also enables rubrics to be incorporated in each stage of the writing tasks. This promotes grading transparency since criteria are made clear from the beginning and results can be promptly communicated. This also improves efficiency in terms of how results can be accessed, and the time taken to disseminate results. The digital nature of the e-Portfolio makes it more engaging to the learners since AFL prescribes that the use of assessments should stimulate student interest and learning.

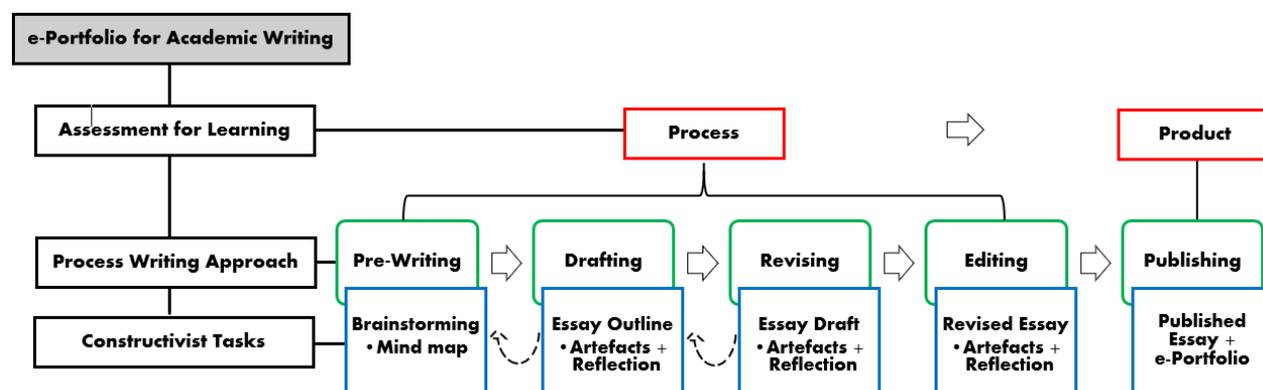


Figure 1. Conceptual Framework.

The process writing approach and AFL share synonymous emphasis on learner progress. For example, the approach prescribes that writing should be conducted and measured in stages rather than judging the written product solely. As a result, the academic writing tasks encompassed in the e-Portfolio are divided into phases, allowing students to draft and revise their work over a period of time. The tasks therefore consist of processes and products: the processes include a mind map as a result of brainstorming (prewriting), an essay outline (drafting), an essay draft (revising), and a final essay (editing); the products (publishing) include the published essay as well as a presentation of the completed e-Portfolio. The process writing approach also encourages revision which is parallel to the emphasis on learner improvement in AFL. This means that editing one's work is natural when progressing from one stage to another. With the e-Portfolio, editing work electronically via online writing applications such as Google Docs and Microsoft Word Online is made possible. In contrast, printing on paper generally implies that work is conclusive and leads to a waste of resources when it comes to editing. For second language learners, breaking down writing into sequential stages may also be especially helpful as students are given opportunities to improve their drafts without being too concerned about producing the perfect essay promptly. Although the stages are depicted as sequential, ideally the process is iterative to allow writers to revise their work if necessary. This framework however acknowledges the time constraint in the real-world classroom since allowing students to restart the whole process is impractical in a realistic setting. Therefore, as indicated by the dotted arrows, students may revert to the first two stages of prewriting and drafting to improve their work if necessary.

A learning theory stipulates how learning takes place in this particular framework. The theory of constructivism is in sync with AFL and the process writing approach because: (i) AFL advocates active student involvement (ii) and the process writing approach emphasises meaning over form. When compiling e-Portfolios, students' varying interpretations are reflected as they need to select artefacts and reflect on these decisions. Using the e-Portfolio, learners can draw from a wide range of online materials instead of being restricted to physical resources. Moreover, real-world resources such as news articles, documentaries, images and podcasts can be included. This amplifies the possibilities for learners to personalise and construct their work based on individuals' perspectives and experiences. Furthermore, social constructivism proposes that those learning experiences are a result of communication. The collaborative aspect is already part and parcel of the writing processes as the digital nature of the e-Portfolio enables it to be easily and widely shared. The writing tasks also allow learners to construct meaning with the help of instructors and peers. The theory of constructivism in the e-Portfolio therefore emphasises the process of creating and maintaining an e-Portfolio through active involvement and collaborative efforts.

DISCUSSION

Based on the formulated conceptual framework, the e-Portfolio and the incorporated writing tasks assess students' academic writing with the aim to improve it over time. Both the e-Portfolio and the incorporated writing tasks should be implemented in stages as this would encourage revision. Opportunities should also be provided for the students to construct knowledge and meaning by communicating their personal experiences with instructors and peers. The framework takes into account the possible challenges that second language learners face when attempting to convey meaning in written form. The design of the framework thereby aims to promote individual expression in a developmental manner using a platform that can engage student interest.

5.1 Applying AFL in e-Portfolio for Academic Writing

The Malaysian Qualifications Agency (MQA) (2008, p. 18) acknowledges the significance of assessment by stating that "it drives student learning" and "it is one of the most important measures to show the achievement of learning outcomes". The MQA (2012) also advocates for AFL in course designs and cites portfolios as a form of formative assessment that can be used to measure learning in tertiary education. Citing e-Portfolio as a new trend, Babae and Tikoduadua (2013) also highlighted its potential as a formative writing assessment for ESL students. They mentioned that formative practices such as feedback and peer assessment can be more easily facilitated when assessing via the e-Portfolio.

The e-Portfolio has the ability to encompass the concepts of AFL especially the principal concept of measuring and improving student learning simultaneously. This was also mentioned by Barrett (2005) who supported the use of an e-Portfolio that corresponds with AFL. With the incorporation of technology, certain features of AFL may be enhanced. Traditionally, portfolios are bulky, commenting or grading entails one to note down physically, and integration of resources is typically limited to printed materials. When technologically enhanced, e-Portfolios are easily accessible via the Internet in which grading can be done by typing comments instantaneously therefore enabling unlimited and timely feedback. Besides that, a variety of digital materials (audio, video, podcasts, images, online news and articles) may also be integrated as part of learning. Based on these improvements, assessment can be effectively used to inform learners of their progress, thereby allowing ample opportunities for students to improve. This is in accordance with Barrett's (2005, p. 18) statement that "to be effectively used to support assessment for learning, electronic portfolios need to support the learner's ongoing learning". Integration of digital evidences may also increase students' interests in the e-Portfolio, therefore realising the notion of AFL that assessments should be engaging for learners. These are also aligned with the MQA's belief (2008) that assessment techniques and tools should be varied, and that assessment results should be promptly relayed to students.

5.2 Applying the Process Writing Approach in e-Portfolio for Academic Writing

Murray (1972) noted that English teachers used to critique students' written work with little regard for methods to help them improve. The implication of the process writing approach is that written work consists of a series of procedures, and writing is not a knowledge or skill that can simply be transferred across different contexts and genres. The process approach also advocates that good writing is not attained as a result of imitating model essays; it involves a series of steps to discover meaning and acquire useful writing techniques. Writing instruction should therefore reflect these steps to allow writers, the time and opportunities to compose then present their final work. Accordingly, as a form of assessment, the e-Portfolio framework embeds the process writing approach by measuring students' work as they progress from the beginning to the end. Coffin et al. (2003) stated that since portfolios assess evidence of learning over time, they allow students to review their work and develop their writing skills through an extended period; to an extent this mirrors the type of writing produced within an authentic professional context. Coffin et al. (2003) also advocated portfolios as a more suitable substitute for summative examination especially for non-native speakers of English. Researchers have applied the process writing approach in e-Portfolio models for non-native speakers and reported positive findings regarding learners' perceptions of the e-Portfolio (Alshahrani & Windeatt, 2012; Kongsuebchart & Suppasetserree, 2018). The findings from Alshahrani and Windeatt's (2012) study showed that respondents experienced increased confidence after using the e-Portfolio. The researchers concluded that writing processes were enhanced as a result of using the e-Portfolio because students were able to better communicate and collaborate with others in the process (Alshahrani & Windeatt, 2012). On the other hand, Kongsuebchart and Suppasetserree's study (2018) indicated that students' writing skills had improved after using a Weblog-based e-Portfolio. According to the researchers, the students benefited from the ample time and opportunities given to review their work using the e-Portfolio (Kongsuebchart & Suppasetserree, 2018).

5.3 Applying the Theory of Constructivism in e-Portfolio for Academic Writing

The theory of constructivism advocates the active construction of knowledge through individual experiences (McLeod, 2003). Assessing via e-Portfolio builds on students' own interpretations of what learning evidences are relevant to include which is in line with the theory of constructivism. This further reflects the pedagogical application of social constructivism in the classroom which is to include materials that connect students' own experiences with the outside world (Kutz & Roskelly, 1991). This is catalysed via the e-Portfolio since it can encompass an even wider array of digital resources such as online articles, videos, and audios. Apart from that, an e-Portfolio is easily and widely shareable, allowing feedback from instructors, peers and other stakeholders if necessary; this expands the chances of learning socially as propagated by social constructivists. The application of constructivist principles in e-Portfolio has been supported by researchers (Barrett, 2005; Ligorio & Sansone, 2009). In the Malaysian context, the theory has been applied in e-Portfolio frameworks (Mazlan, Koo, & Jano, 2015; Mohd Bekri, Ruhizan, Norazah, Faizal

Amin Nur, & Tajul Ashikin, 2013). As such, incorporating constructivism in this study's e-Portfolio framework is fitting particularly since second language acquisition is a complex process that requires students to communicate about their existing experiences. The framework proposes that e-Portfolio can serve as a better medium to draw out students' own thoughts and experiences, allowing instructors and peers to better understand them and accordingly provide prompt feedback. By applying constructivist principles to the e-Portfolio, the learner's role becomes central in the knowledge-building process.

CONCLUSION

The MQA stated that "assessment is integrated with and cannot be separated from student learning" (2012, p. 1), and that "the link between assessment and learning outcomes should be reviewed periodically to ensure its effectiveness" (2008, p. 19). Hence, attempts to upgrade learning methods entail enhancing assessment methods as well. Considering the fact that learners in Malaysian universities vary in background and English language proficiency, there is therefore a need to come up with pedagogical as well as assessment methods that cater to learner needs and are relevant to current practices.

The integration of ICT has become necessary in the 21st century classroom due to the relevance of technology and the upgrade of teaching and learning philosophies. As echoed by Tomlinson (1995), language assessment should present learning opportunities for the assessors as well as the candidates who are being assessed. Educators should therefore reflect on how they can assess more effectively in today's modern-day, technology-integrated classroom.

With e-Portfolio, assessment in English language courses no longer needs to be of pen and paper; progress as well as product can now be monitored and documented through audio recordings, podcasts, digital storytelling, and blogs, just to name a few. Applying e-Portfolio as an educational tool is therefore a promising idea to engage Malaysian learners in the language classroom, with that, the execution of the e-Portfolio framework is the way forward. The findings of this study may provide insights to researchers and educators who are keen to explore the use of e-Portfolio in the second language context. The findings may also contribute to the gap in writing assessments. Future research should explore the implementation of e-Portfolio in actual classrooms in order to examine the learners' perceptions of its use.

REFERENCES

- Abd-Wahab, S. R. H., Che-Ani, A. I., Johar, S., Ibrahim, M., Ismail, K., & Mohd-Tawil, N. (2016). EPortfolio as an assessment tool: The development of rubric criteria. *Pertanika Journal of Social Sciences & Humanities*, 24(April), 143-154.
- Ali, S. A. (2005) *An introduction to electronic portfolios in the language classroom*. Retrieved December 5, 2016 from <http://iteslj.org/Techniques/Ali-Portfolios.html>
- Alshahrani, A., & Windeatt, S. (2012). Using an e-Portfolio system to improve the academic writing performance of ESL students. In L. Bradley & S. Thouëсны (Eds.). *Proceedings in EUROCALL Conference* (pp. 10-14). Retrieved from <https://files.eric.ed.gov/fulltext/ED574901.pdf>
- Babae, M., & Tikoduadua, M. (2013). E-portfolios: A new trend in formative writing assessment. *International Journal of Modern Education Forum*, 2(2), 39-46.
- Badiozaman, I. F. A. (2015). Interrelated influence of internal and external factors on Malaysian learners' self-concept in academic writing. *Journal of Asia TEFL*, 12(1), 79-115.
- Barrett, H. C., & Wilkerson, J. (2004). *Conflicting paradigms in electronic portfolio approaches*. Retrieved from <http://electronicportfolios.com/systems/paradigms.html>
- Barrett, H. C. (2005). White paper: Researching electronic portfolios and learner engagement. *The REFLECT Initiative*, 1-25. Retrieved from <https://www.helenbarrett.com/reflect/whitepaper.pdf>
- Bowen, G. A. (2009). Document analysis as a qualitative research method. *Qualitative Research Journal*, 9(2), 27-40.
- Brown, H. D. (2001). *Teaching by principles: An interactive approach to language pedagogy* (2nd ed.). New York: Longman.

- Brown, H. D. (2004). *Language assessment: Principles and classroom practices*. New York: Pearson Education.
- Challis, D. (2005). Towards the mature ePortfolio: Some implications for higher education. *Canadian Journal of Learning and Technology*, 31(3).
- Chin, C. (2018, Nov 4). Ten schools to join student e-Portfolio trial run next year. *The Star Online*. Retrieved from <https://www.thestar.com.my/news/nation/2018/11/04/ten-schools-to-join-student-eportfolio-trial-run-next-year>
- Coffin, C., Curry, M. J., Goodman, S., Hewings, A., Lillis, T. M., & Swann, J. (2003). *Teaching academic writing: A toolkit for higher education*. London: Routledge.
- Fukunaga, S. (2018). English writing eportfolio for university STEM majors. *Procedia Computer Science*, 126, 1571–1577.
- Glaserfeld, E. V. (1995). A constructivist approach to teaching. In Steffe L. P. & Gale J. (eds.) *Constructivism in education* (pp. 3-15). Erlbaum, Hillsdale.
- Gray, D. E. (2009). *Doing research in the real world* (2nd ed.). London: Sage.
- Greenberg, G. (2004). The digital convergence: Extending the portfolio model. *EDUCAUSE Review*, 39(4), 28–37.
- Hafizan, M., Duggan, P., Tracy, F., & Stott, T. A. (2015). E-portfolio development and implementation in Malaysian Technical and Vocational Education Training (TVET): A mixed methods analysis of stakeholders' and students' perceptions. *International Journal of Arts & Sciences*, 8(1), 243-261.
- Halliday, M. A. K. (1993) Towards a language-based theory of learning. *Linguistics and Education*, 5, 93-116.
- Hein, G. E. (1991). Constructivist learning theory: The museum and the needs of people. Retrieved from <https://www.exploratorium.edu/education/ifi/constructivist-learning>
- Hilal, A. H., & Alabri, S. S. (2013). Using NVivo for data analysis in qualitative research. *International Interdisciplinary Journal of Education*, 2(2), 181-186.
- Hirtle, J. S. P. (1996). Coming to term: Social constructivism. *The English Journal*, 85(1), 91-92.
- Imenda, S. (2014). Is there a conceptual difference between theoretical and conceptual frameworks? *Journal of Social Sciences*, 38(2), 185-195.
- Khoo, L. M. S., Maor, D., & Schibeci, R. (2011). The engineering eportfolio: Enhancing communication, critical thinking and problem solving and teamwork skills? *World Academy of Science, Engineering and Technology, Open Science Index 53, International Journal of Information and Communication Engineering*, 5(5), 788-793.
- Kongsuebchart, J., & Suppasetsee, S. (2018). The effect of a weblog-based electronic portfolio on Thai EFL undergraduate students' English writing skills. *Computer Assisted Language Learning Electronic Journal*, 19(2), 28-46.
- Krause, K. (2006). *EPortfolios for graduate students: A discussion paper*. Centre for the Study of Higher Education: University of Melbourne.
- Kutz, E., & Roskelly, H. (1991). *An unquiet pedagogy*. Portsmouth, NH: Heinemann.
- Labuschagne, A. (2003). Qualitative research - Airy fairy or fundamental? *The Qualitative Report*, 8(1), 100-103.
- Lee, K. S., Azman, H., & Koo, Y. L. (2010). Investigating the undergraduate experience of assessment in higher education. *GEMA Online Journal of Language Studies*, 10(1), 17-33.
- Ligorio, M. B., & Sansone, N. (2009). Structure of a blended university course: Applying constructivist principles to blended teaching. In C. R. Payne *Information Technology and Constructivism in Higher Education: Progressive Learning Frameworks*, pp. 216-230. IGI Global.
- Lorenzo, G., & Ittelson, J. (2005). *An overview of e-Portfolios*. *Educause Learning Initiative*. Retrieved from <https://net.educause.edu/ir/library/pdf/eli3001.pdf>
- Malaysian Qualifications Agency. (2008). *Code of practice for programme accreditation*. Petaling Jaya, Malaysia: Malaysian Qualifications Agency. Retrieved from http://www.mqa.gov.my/en/garispeduan_coppa.cfm.
- Malaysian Qualifications Agency. (2012). *Guidelines to good practices: Assessments of students*. Petaling Jaya, Malaysia: Malaysian Qualifications Agency. Retrieved from <http://pesona.mmu.edu.my/~jhlw/OBE%20Reference/ASSESEMENT%20OF%20STUDENT.pdf>
- Mazlan, K. S., Khoo, L. M. S., & Jano, Z. (2015). Designing an eportfolio conceptual framework to enhance written communication skills among undergraduate students. *Asian Social Science*, 11(17), 35-47.

- McKensie, L., & Tomkins, G. E. (1984). Evaluating students' writing: A process approach. *Journal of Teaching Writing*, 3(2), 201-212.
- McLeod, G. (2003). Learning theory and instructional design. *Learning Matters*, 2, 35-43.
- Melor, M. Y., Hadi, S., & Norazah, N. (2012). ESL Pre-service teachers' perceptions on the use of paragraph punch in teaching writing. *English Language Teaching*, 5(10), 138-147.
- Ministry of Education. (2013a). *Malaysia education blueprint 2015 – 2025 (Higher Education)*. Putrajaya: Kementerian Pendidikan Malaysia.
- Ministry of Education. (2013b). *Malaysia education blueprint 2013 – 2025 (Preschool to Post-Secondary Education)*. Putrajaya: Kementerian Pendidikan Malaysia.
- Ministry of Higher Education. (2011). *Dasar e-pembelajaran negara: Institusi pengajian tinggi*. Putrajaya: Kementerian Pengajian Tinggi Malaysia.
- Ministry of Higher Education. (2017). *The ecosystem for English language learning and assessment in higher education*. Putrajaya: Kementerian Pengajian Tinggi Malaysia. Retrieved from <http://www.mohe.gov.my/muat-turun/awam/manual-dan-garis-panduan/420-the-ecosystem-for-english-language-learning-and-assessment-in-higher-education/file>
- Mohamad, S. N. A., Embi, M. A., & Nordin, N. M. (2015). Are students ready to adopt e-portfolio? Social science and humanities context. *Asian Social Science*, 11(13), 269-275.
- Mohd Bekri, R., Ruhizan, M. Y., Norazah, M. N., Faizal Amin Nur, Y., & Tajul Ashikin, H. (2013). Development of Malaysia skills certificate e-portfolio: A conceptual framework. *Procedia – Social and Behavioral Sciences*, 103(2013), 323-329.
- Muhammad Kamarul, K. (2016). Using Facebook as an e-portfolio in enhancing pre-service teachers' professional development. *Australasian Journal of Educational Technology*, 32(1), 19-31.
- Murray, D. M. (1972) Teaching writing as a process, not product. *The Leaflet*, 71, 11-14.
- Musa, N. C., Koo, Y. L., & Azman, H. (2012). Exploring English language learning and teaching in Malaysia. *GEMA: Online Journal of Language Studies*, 12(1), 35-5.
- Mustafa, Z. (2017, October 24). MOHE launches Malaysia English Assessment for university students. *New Straits Times*. Retrieved from <https://www.nst.com.my/news/nation/2017/10/294741/mohe-launches-malaysia-english-assessment-university-students>
- Nambiar, V. G. K., & Melor, M. Y. (2017). Reflective practice with e-portfolio. *Malaysian Journal of ELT Research*, 13(1), 43-54.
- New Zealand Ministry of Education. (2011). *Digital Portfolios: Guideline for beginners*. Wellington: New Zealand Ministry of Education.
- Noraini, S., & Lee, K. W. (2014). The development of the Writing Portal (TWP) to support ESL pre-service teachers' writing needs. *International Journal on e-Learning Practices*, 1(1), 89-104.
- Nunan, D. (1991). *Language teaching methodology: A textbook for teachers*. New York: Prentice Hall.
- Rafik-Galea, S., Arumugam, N., & Mello, G. (2012). Enhancing ESL students academic writing skills through the term-paper. *Pertanika Journal of Social Sciences & Humanities*, 20(4), 1229-1248.
- Reeves, T. C. (2006). How do you know they are learning? The importance of alignment in higher education. *International Journal of Learning Technology*, 2(4), 294-309.
- Said, N., & Lee, K. W. (2014). The development of the Writing Portal (TWP) to support ESL pre-service teachers' writing needs. *International Journal on e-Learning Practices*, 1(1), 89-104.
- Shafie, L. A., Maesin, A., Osman, N., Nayan, S., & Mansor, M. (2010). Understanding collaborative academic writing among beginner university writers in Malaysia. *Studies in Literature and Language*, 1(2), 58-69.
- Stannard, R., & Basiel, A. S. (2013). A practice-based exploration of technology enhanced assessment for English language teaching. In Motteram, G. (Ed.). *Innovations in learning technologies for English language teaching* (pp.145-174). London: British Council.
- Stiggins, R. (2005). *Assessment for learning defined*. Assessment Training Institute. Retrieved January 23, 2018 from <http://downloads.pearsonassessments.com/ati/downloads/afldefined.pdf>
- Stiggins, R. & Chappuis, J. (2006). What a difference a word makes: Assessment “for” learning rather than assessment “of” learning helps students succeed. *Journal of Staff Development*, 27(1), 10-14.
- Strauss, A. L., & Corbin, J. M. (1990). *Basics of qualitative research: Grounded theory procedures and techniques*. Newbury Park, CA: Sage Publications.

- Tomlinson, B. (1995). Testing to learn: A personal view of language testing. *English Language Teaching Journal*, 59(1), 39–46.
- Vygotsky, L. (1978). *Mind in society*. London: Harvard University Press.