Designing an ePortfolio framework for academic writing for technical university students

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ABSTRACT – There is a need to design an innovative teaching and learning approach that allows students to participate actively in the learning process. Specifically, this study intends to design an ePortfolio framework that can be embedded into an Academic Writing subject. This study adopts a three-stage of research process: concentrates on finding features of the ePortfolio framework; designs the ePortfolio framework and evaluates the newly designed ePortfolio framework. It is expected that this study contributes to the creation of an innovative teaching approach, a student-centred learning approach that utilises online technology.

1. INTRODUCTION

Within the era of globalization and the advancement of online technology, there is a need to design an innovative teaching and learning approach that allows students to participate actively in the learning process. Leveraging ICT and globalised online learning have been highlighted in the Malaysia Education Blueprint 2015-2025 for Higher Education (MEB-HE) [1] as the seventh shift and ninth shift respectively to transform the education in Malaysia. Students have problems to acquire communication skills in English language. In the phase of advancement of digital technology, it is crucial to develop an innovative teaching and learning approach that enables students to be active in the learning process. This is also stressed by MOHE that emphasizes that innovative teaching approach is pivotal for the development of excellent human capital in the globalized 21st century [1]. The recent job market in Malaysia requires the graduates to be more competent thus needing the necessary graduate attributes. However, many employers have complained graduates lack the required graduate attributes vital for employment such as communication, problem solving, and team work skills [2]. This was supported by the QS Global Skills Gap in the 21st Century report which stated that there were "sizable and consistent disparities" among boss expectations and student's skills according to evidence prepared by 11,000 bosses and 16,000 students across the world. The reasons for unemployment were due to low proficiency of English and absence of graduate attributes such as critical thinking, communication and creativity. The report stated that bosses in Malaysia expressed their concern that there was a gap in graduate attributes and that universities did not cater to the needs of the students' employability. The report revealed problem-solving, teamwork and communication skills were the most

wanted graduate attributes sought by the bosses [2]. Similar concern was raised on the issue of employability among graduates especially when they were not able to secure jobs once they graduated [3]. Several studies showed that graduates did not have the needed graduate attributes demanded by the workforce and community [4]. Some graduate attributes which are very much in demand are oral communication, listening and written communication skills. Another research by the firm IDC in collaboration with INTI International University and College found that graduate attributes and critical thinking were categorized among the main skills needed for the future employment [5].

Several studies on ePortfolios have been carried out on learning [6]. The ePortfolio is created on the constructivism paradigm; students generate information in the activities when constructing their ePortfolios. ePortfolio can be used for several purposes. For example, ePortfolio can be used as a showcase to show their work to the potential bosses. It can also be utilized to as a learning process and development. Thus, this study aims to design an innovative teaching approach to improve students' written English communication, the skills which are considered important for students entering the workforce. The use of an ePortfolio has been considered as a powerful tool to develop students' communication as well as critical thinking skills as it allows students to produce their own reflective written products via blogs. This study adopts a three-stage of research process. The first stage concentrates on finding features of the ePortfolio framework that can help to enhance students' written communication skills. This is followed by the design stage which involves identifying ways to embed the ePortfolio in an Academic Writing subject. Finally, the newly designed ePortfolio framework will be evaluated for its potential to improve students' written communication skills. It is expected that this study contributes to the creation of an innovative teaching approach, a student-centred learning approach that utilises online technology.

Specifically, this study intends to design an ePortfolio framework that can be embedded into an Academic Writing subject. Thus this study is undertaken to investigate the impact of embedding an ePortfolio into an Academic Writing to enhance written communication skills for technical university students. The objectives of the study are: 1. To identify the features of ePortfolio framework that can enhance written communication skills for technical university students; 2. To design an ePortfolio framework to be embedded into an Academic

Writing subject syllabus for technical university students; and 3. To evaluate the effectiveness of the ePortfolio framework among technical university students.

2. METHODOLOGY

The study examines the learning process and uses the students' voice to design an ePortfolio framework to enhance written communication skills and evaluate its effectiveness for technical university students. Assessing student achievement of the attributes is therefore important and ePortfolio has the potential to enhance written communication skill. The ePortfolio framework explains the learning process and adapts the Plan-Do-Review cycle. This study examines the learning process in developing an ePortfolio by adapting the Plan-Do-Review cycle [7], as shown in Figure 1. Pallister's [7] Plan-Do-Review model underpins a social constructivist approach to learning. This cycle involves student-centred learning and the students have to become active, critical and reflective in their learning and take responsibility for their learning. It fosters authentic learning when students are placed in the centre of the learning process, and actively engage in constructing ePortfolios and gain the experience of the learning by planning, selecting, reflecting, and sharing the artifacts.
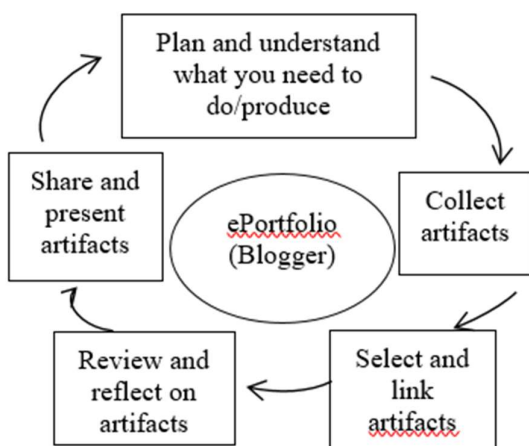

Figure 1 The ePortfolio process as a 'Plan–Do-Review' cycle (adapted from Pallister [7]).

Secondary data will be obtained from journal articles and books to find the features of the ePortfolio framework that can help to enhance students' written communication skill. This will provide a firm foundation in structuring the ePortfolio framework. The design and implement stage involves identifying ways to embed the ePortfolio into an Academic Writing. Based on the literature, this study will develop a research questionnaire. The questionnaire is to find out students' perceptions of the use of ePortfolio. Interview questions will be constructed to elicit information from the focus group interviews whether ePortfolio had any effects on their written communication. Primary data will be collected through a self-administered questionnaire, interviews from five focus group interviews, and document analysis which contain written reflections

from the students. These reflections artifacts will be collected as evidence to show whether the learning process will improve as the result of the ePortfolio as a potential tool in enhancing written communication skills. This document comprised three written entries of reflection created by students. The students reflected on their learning in three intervals: on the 4th, 9th, and 13th week. The effectiveness of the ePortfolio framework used in the English subject will be investigated too. The newly designed ePortfolio framework will be evaluated for its potential to improve students' communication skills. Appropriate data analysis approaches and statistical test will be used on the data using the SPSS 17 software to analyse the questionnaire data. All interview responses will be transcribed and analysed. Narrative descriptions will be categorized to identify patterns using the NVivo software and later summarize responses in order to bring meaning to the text. Document analysis, comprising the students' written reflections will be analysed using a written communication rubric to track whether students' written communication showed any significant difference over time.

3. RESULTS AND DISCUSSION

The anticipated results will display the features to be included in the framework. The ePortfolio framework will be tested on students and the data collected via questionnaire, interviews and document analysis can answer the research objectives. This research is expected to lead to the development of an innovative teaching method, a student-centered learning method that applies online technologies.

4. CONCLUSIONS

The new developed ePortfolio framework will help English language instructors to design their lessons in such a way which will enhance students' written communication. Thus, the technical undergraduates will be able to upgrade their English written communication skills. An ePortfolio framework can also be used in the teaching and learning in an English subject in the technical universities.
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5. ACKNOWLEDGEMENT

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