

IMPROVING THE EFFECTIVENESS OF STUDENTS' PROGRESS ASSESSMENT IN A BLENDED LEARNING ENVIRONMENT AT LAC HONG UNIVERSITY

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ABSTRACT

Thanking to the application of digital technology in education, students are obtaining outstanding benefits such as diverse learning resources, more learning flexibility in both time and place. However, besides these advantages, students must wisely avoid inappropriate information sources and trends by selecting and following the right way to receive, learn and process information. In the competence-development-learning model, students become the center being proactive in selecting information, analyzing and proposing solutions for problems with support from lecturers and reference resources. Many questions exist and require educational institution and faculty to answers such as how to assess students' understanding and if it is in the right direction; how to see students' progress to assist students positive change; how to conduct formative assessment throughout the entire student progress instead only summative ones (in final exam, final product). This paper reflects the practical results to answer these above questions when applying ePortfolio in assessing students' performance in the blended learning environment at Lac Hong University. The research is conducted as a part of EMVITET Erasmus+ project.

Keyword: *ePorfolio, Formative assessment, Education 4.0, Digital pedagogy*

1. INTRODUCTION

Digital technology has become popular nowadays. It has quite changed the way our lives operate and the world has become flatter. Digital technology has not only affected living infrastructure, entertainment demands but also changed a lot of teaching and learning recently. Information sharing and searching are more and more convenient blurring geographical distance. In particular, because of COVID-19 pandemic, the application of digital technology in teaching and learning is considered indispensable. COVID-19 actually makes a big leap in the use of digital technology in teaching and learning at schools in Vietnam and online learning management systems (LMS) are deployed to the maximum extent. The way students get along with the content in class also changes. Students no longer study directly in class (offline, Face-to-Face), but

can join virtual classes or virtual group discussions. They only need a mobile device (BYOD - Bring your own device) to study anywhere. Changes in learning method lead to the fact that lecturers also need to change their teaching methods and assessment.

Digital pedagogy integrated teaching methods have been constantly developing with the strong support of digital apps and systems in managing and presenting lecture content, thus increasing the interaction between teacher and student. For learning management systems, supporting open-source software such as Moodle, Canvas, etc is prominent. For learning or online seminars, the popular tools are Zoom, Webex, Google Meet, etc. For creating interaction as well as a rapid assessment on students' in-class knowledge achievement, there are PollEveryWhere, Mentimeter, Kahoot, Quizz, and so on.

Obviously, the diversity of platforms and current apps has helped the development of digital technology integrated training and it is COVID-19 pandemic a rough push for the world and specifically in Vietnam move on the Education 4.0 path (Le et al, 2020; Yogesh et al, 2020; Dinh et al, 2020; Iivari et al, 2020). According to Le (2020), depending on the form and content, the lecturer will choose appropriate methods and tools to convey the lessons (Fig. 1).

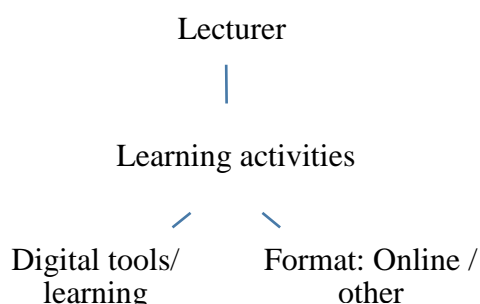


Figure 1: The relationship between lecturers and teaching activities in digital pedagogy (Le et al, 2020)

It is clear that digital technology in education supports not only lecturers but also students for plenty of benefits such as more diverse data sources, more flexible time and place for learning. However, at the same time, there exists a challenge for students to smartly adapt and select the right way to learn and handle suitable contents only. To promote the effectiveness of online and blended learning, besides changing methods for teaching and presenting contents, the instructors are highly required to engage students in the lesson. Students become a major actor in learning models, criticizing, commenting and giving opinions on the content they receive. In this learning model, students must be actively receiving information and with the support of teachers and their peers, they analyze and propose solutions to problems. Student-centered learning and digital technology are the foundation to foster education as well as creativity, knowledge acquisition and problem-solving skills of students.

How does the teacher assess understanding of the courses in which students are being taught? How has my student progressed each semester? What research and skills demonstrate their competencies? In a university environment, students attend many courses with many different lecturers, it is not uncommon for lecturers to remember and not grasp the details of students' competencies. To solve this problem, students must be proactive in receiving and presenting their information. In other words, students must have records and comments on what they have learned, their own experiences when they experiment (successful or unsuccessful). Currently, to assess students' progress, using electronic portfolio (ePortfolio) is the most suitable solution (Kunnari, 2018; Kunnari, I. & Laurikainen, M, 2018; Uí Choistealbh, 2018).

2. E-PORTFOLIO

Electronic portfolio or ePortfolio has been introduced since the 1990s. According to Abrami, P.C. & Barret, H (2005), ePortfolio is a solution using technology to store content in various formats of visual and auditory manifestations including text, images, audio, video, etc. ePortfolio, an application allowing users to organize and track learning contents, is designed for various development processes. It is also an information channel to effectively promote CV (Curriculum Vitae) for future work goals. ePortfolio is unlike CV, which often summarizes the achieved results or impressive milestones, but is synthesized as a streamline, an individual's journey, organized contents organized in terms of time, subject and target.

Abrami et al (2008) emphasizes that the three main goals of ePortfolio are process, performance and assessment and that ePortfolio is developed to help keep track of the whole process, how and what students learn and achieve in a blended, competency-based learning environment (taking into account obtained knowledge, assignments,

project implementation, students' progress and changes, etc). Individual performance on ePortfolio, suggestions and comments from teachers and other friends encourage and motivate students to gradually change, develop and improve lifelong learning capabilities.

(Barrett, 2010) shows two sides that need to be balanced when using ePortfolio are Documentation of Learning and Documentation of Achievement [Figure 2].

Documentation of Learning focuses on the main activities in the student's learning and collaboration while Documentation of Achievement focuses on showcasing achievements of students. As shown in Fig. 2, reflection is the kernel both in working and showcasing. Teachers need to monitor, suggest and evaluate students to develop feedback skills in the learning process, from which they can form self-development activities.

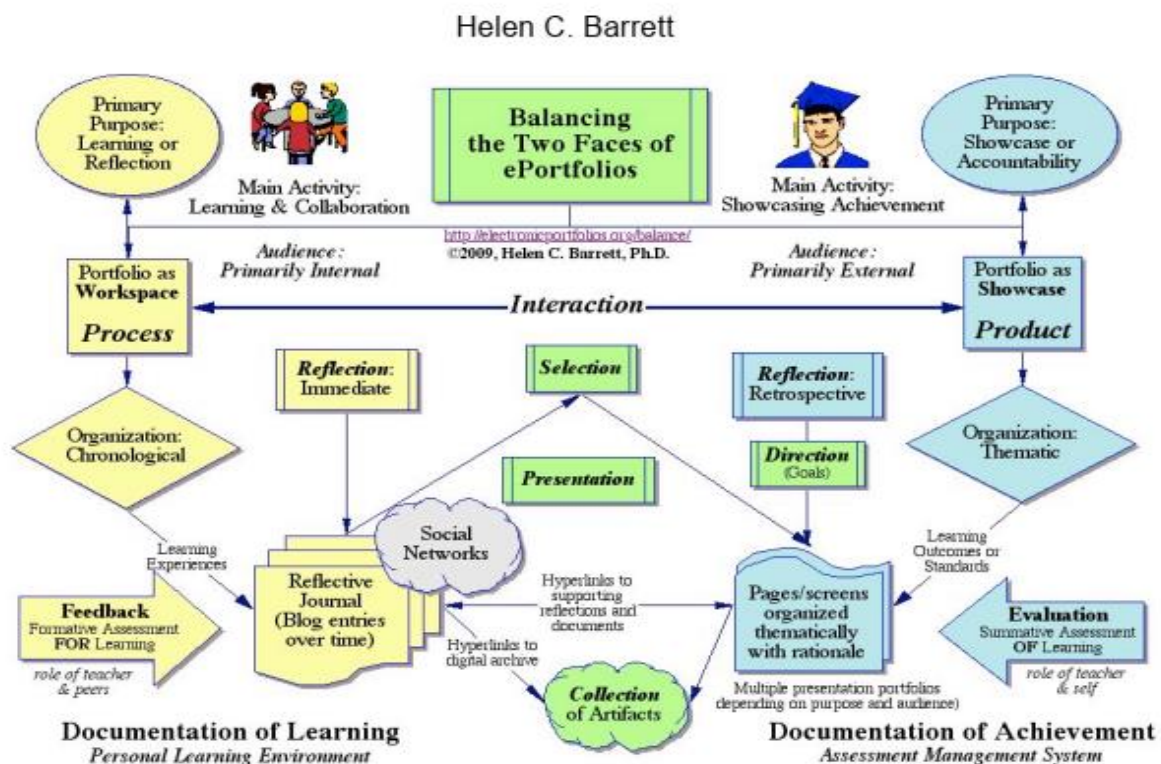


Figure 2. Two sides that need to be balanced when using ePortfolio (Barrett, 2010)

An ePortfolio must be clear at each required level (usually divided into 3 levels) for students to avoid discontinuity and show coherent content. At Level 1 – Storage, students filter information and store it on ePortfolio. At Level 2 – Progress, students show their comments and feedback on the contents they have collected. At Level 3 – Product, from the feedback and comments on the information, students proceed to analyze more thoroughly to come up with models and solutions for products. Here, students need to utilize the most the content in Level 2 in addition to doing further experiments,

investigation and update to finalize their desired products. A good result for this process is a product clearly presented in Documentation of Achievement.

3. EXPERIMENTS

To experimentally survey the use of ePortfolio to evaluate students' progress in blended learning environments, the research focus on assessing students at Level 2 in balanced when using ePortfolio of Barrett (2010). A survey conducted before the start of the semester showed that 146 students heard about ePortfolio for the first time, 19

students had heard about but did not understand the benefits of ePortfolio and only 4 students knew and understand the benefits of ePortfolio. After the survey, these students (169) were asked to individually create an eportfolio for each student and will record the course content taught during the semester. Taking notes in Learning and Researching is highly necessary for students, especially for reflecting students' understanding (163 out of 169 students agreed that individual handwriting notes would help remember better) (Fig. 3). Nowadays, how are students noting the knowledge? Is it effective for them in synthesizing and retrieving information? In

the survey, more than 110 students noted the content on notebooks, notes or text files (MS Word); 44 students posted directly on social channels (Facebook); 5 students did not note anything and only read articles on LMS; and only 10 students had their own websites or blogs (Figure 4). Obviously, a large proportion of students are using the method of recording and synthesizing knowledge by subject, subject association, etc ineffectively for monitoring and evaluation. A big problem is that students face difficulties in writing or presenting knowledge they learn by their own words and their judgment (accounting for 130 out of 169 students).

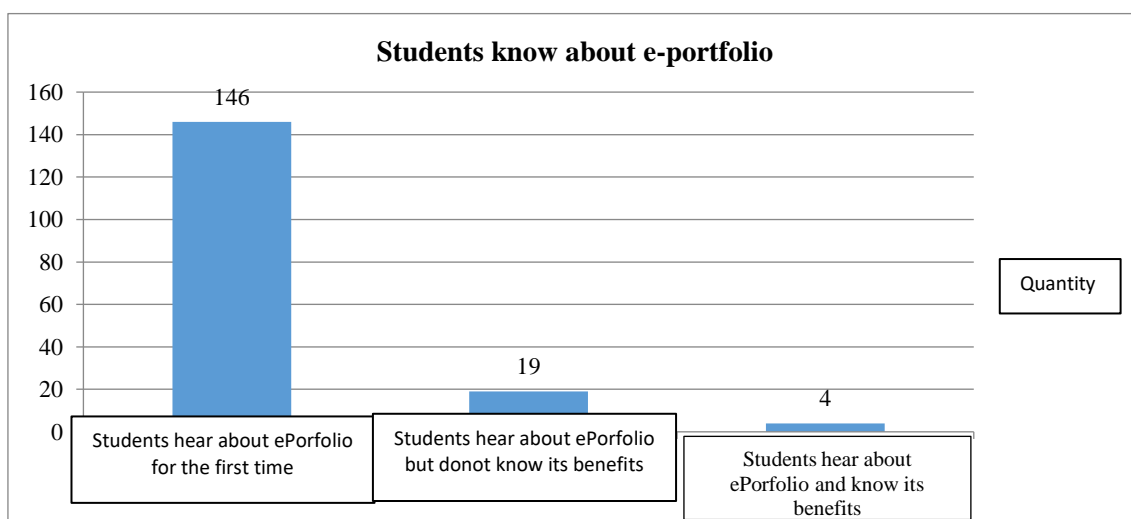


Figure 3. Awareness of students about ePortfolio

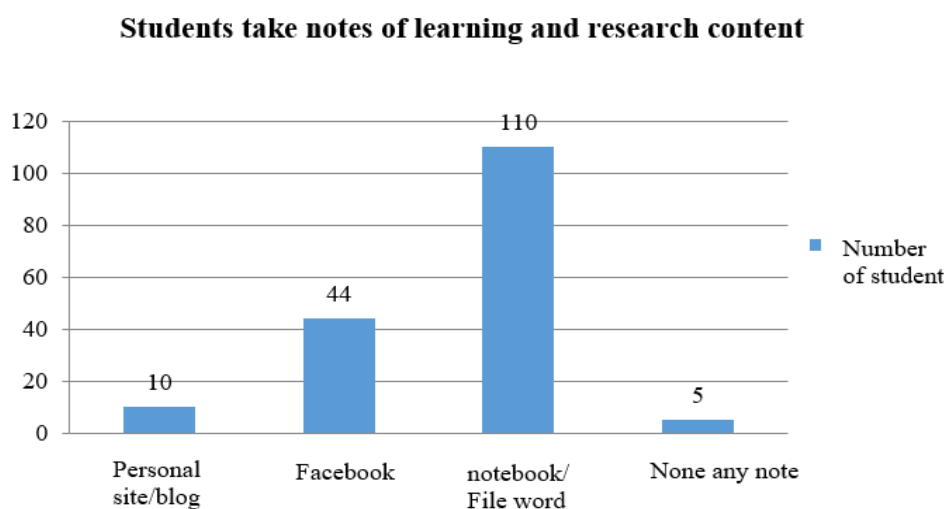


Figure 4. Ways that students are noting down their learning and research contents

To build up an ePortfolio, there are many open sources for students to choose such as Google sites, wix.com, blogger.com, profile pages on recruitment channel (e.g. mywork.com.vn, careerbuilder.vn, etc). One of which, Google sites, is a very convenient and popular software application to create ePortfolio or personal site with useful supports, for instance, user-friendly interface even for students who have never learned about website design; convenient ownership that is linked to personal email account; various available templates and easy connection with other resources.

When building up ePortfolio, students need to realize that ePortfolio is a place to (i) reflect the knowledge that they have learned and researched; (ii) additionally supplement the studied contents; (iii) list and systemize one's own knowledge to make appropriate adjustments in the learning process; (iv) share resources as well as introduce his/herself on the network in details and gradually build up a personal resumé

(curriculum vitae) chronologically, basing on which businesses can evaluate candidates' abilities exactly. Students' performance as well as direct test results are clear bases for the teacher to give formative assessment and provide additional guidance for students.

During the online learning time, students present their obtained knowledge and problem-solving following the cycle Analyzing - Modeling - Experiment - Feedback on their personal ePortfolio. Teachers can easily track the progress of students and give comments and feedback so that students could improve regardless of class hours. It is important that when evaluating the content on ePortfolio according to the understanding of students, teachers identify better the problems that students are still to face. Students complete the content on ePortfolio according to the process shown in Figure 5. This process assists students to divide their work into stages, thus make it easy to identify problems and solve them at each stage.

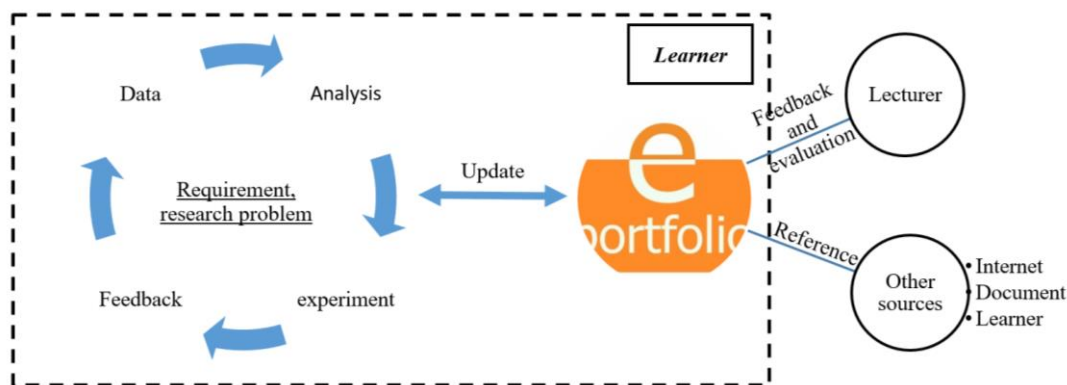


Figure 5. Students' receiving and processing information process to update the content on the e-Portfolio

At the end of the semester, the results between the use of ePortfolio and the student learning scores showed a fairly high correlation (Fig. 6). Measurement criteria are related to the course content deployed on ePortfolio (good/fair/average updates available or no interaction). The results showed that 40 students, who had good interactions and presented clear content on ePortfolio including/excluding content

revised according to the teacher's comments, achieved excellent course results from 9 to 10 points. The subject scores dropped steadily with the quality of the student's ePortfolio. 55 students with fair content achieved scores around 7-8 points whilst 66 students with a sparse content got 5-6 points and 5 students with no interaction gained scores less than 5 points. It is worth noticing that there were 3 students who did not have

ePortfolio interaction but still score 9-10 points. The reason is these 3 students were all excellent students before and during the evaluation period according to ePortfolio and

they were implementing high-level projects of the course, so they did not have to show the research content weekly or monthly.

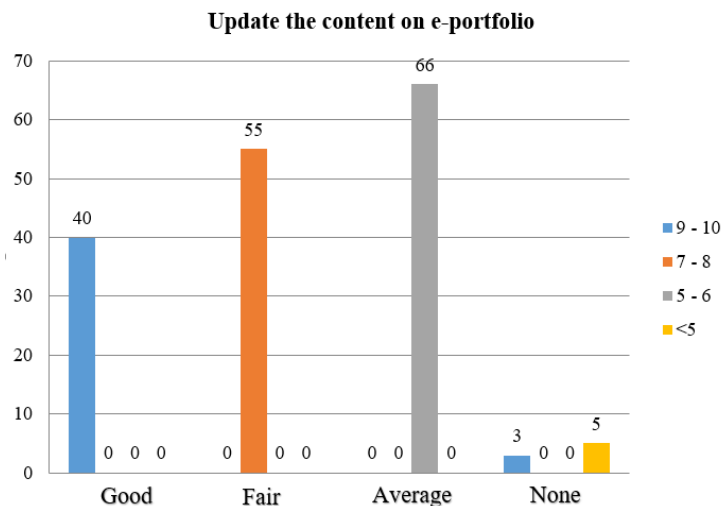


Figure 6. Course scores of 169 students based on their ePortfolio and direct test results.

4. CONCLUSIONS

From the above results, it can be seen that students who have recorded, implemented and updated additional information such as learning knowledge, receiving and following comments on ePortfolio actually have better learning results, especially in presentation skills. Teachers are able to follow-up, support and evaluate students' competencies formatively and summatively regarding the ability to analyze and solve problems, ability to present and communicate. Students themselves express better understanding by responding to the requirements in their own expression.

The application of ePortfolio for assessment not only improves efficiency and accuracy but also gradually builds up students' lifelong learning skills. Level 1 competencies including listening, watching and taking notes, storing content on demand periodically by weeks and months are firmly achieved. Moreover, a habit at level 2, that students go deeper into searching information, analyze and comment on the content through exercises and projects with

good time arrangement for learning activities, is formed. This is a stepping stone to achieve level 3 easily. Level 3 provides an overview of students' abilities through knowledge acquired by topics or products on their ePortfolio, students' strengths, as well as their future directions and goals.

Obviously, the approach to gain knowledge and resources is gradually changing. The role of the teachers and learners have also changed in blended learning environment. Thus, the method of teaching and learning must also be changed. Being the center, the learners become more proactive, combine the surrounding factors, e.g. the teachers or the coaches, other resources and environment to achieve results, skills and products. Now, the teachers are no longer the main character as in the traditional teaching model. However, because they have a great impact on the student's learning, improvement and development process, they must also change a lot.

ePortfolio is highly suggested to put into a comprehensive application among Lac Hong University students in particular and Vietnamese schools in general. Although in

the first stage, students face many difficulties in presenting knowledge and responding to requests according to their personal style, it can be seen that ePortfolio is a good means for students to chain all their knowledge and work. This is also a tool to improve presentation skills and the channel for objective and accurate assessment.

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