

Planning and Design of Online Peer Assessment Professional Development Training in Higher Education

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Abstract— Due to the impact of COVID-19 pandemic, universities around the world have been compelled to rethink how they design and implement student assessment strategies. In addition, it has also led to a re-strategizing of how professional development of academics is carried out to mitigate this rethinking endeavor. In response, this work-in-progress paper presents an Open Educational Resource (OER) Professional Development (PD) training plan using the Learning Management System (LMS) known as MOODLE for the University of the South Pacific (USP). The proposed OER, PD training comprises of three modules and is scheduled to go live during the July semester break of 2021 over a three-week period. Module 1 - focuses on understanding the peer assessment strategy, Module 2 – presents a framework for Implementing Online Peer Assessment (OPA) using the MOODLE Workshop Tool and Module 3 – focuses on academics developing an assessment for OPA from their own courses and participating in OPA process. The paper provides considerable insights for Higher Education Institutes (HEI) in planning and designing online PD training on OPA for academics.

Keywords—Peer Assessment, Professional Development, Higher Education, Learning Management System

I. INTRODUCTION

With recent impact of COVID-19 pandemic in HEIs around the world, the universities are rethinking, re-modeling and re-designing assessments to suit remote teaching methods currently embraced by HEIs during lockdown restrictions.

The Centre for Flexible Learning (CFL) team at USP carried out a staff readiness survey at the beginning of the year, where e-Assessment PD training was one of the priority offerings planned as per academics' responses to the online survey.

More specifically, an area of need that was highlighted in the survey was in the area of OPA. This led to a collaboration between the CFL and the lead author, Mr. Krishan Kumar, a member of staff of the School of Information Technology Engineering, Mathematics and Physics (STEMP).

This paper therefore focuses on this collaborative effort in the design of a PD training for academics on the use of OPA in HEI as an alternative form of student centered online assessment that enhances student experiences by adding value

to transferable skills of students comprising of critical thinking, teamwork and communication skills [1] [2].

Ultimate benefit of using OPA in HEI courses mitigates the challenges of 21st century academics in ensuring learner achievement of learning outcomes, timely marking and provision of assessment feedback. Furthermore,

As proposed by [1], the need to develop and contribute best practices and frameworks as a baseline for PD of academics in HEI. Moreover, the overall aim of this Online PD is to equip academics of 21st century with the student centered assessment methods and contribute to current dearth of literature in Online PD for academics in OPA.

The paper is organized as follows: Section II reviews current literature on LMS Moodle, use of peer assessment strategy in higher education and description of proposed OPA framework. Followed by Section III outlines the methodology on plan and design of OPA, PD training. Section IV outlines conclusion and future work.

II. LITERATURE REVIEW

With the race in providing quality education aligned with SDG goals comes with various length of responsibilities by HEI is making sure their academics are also provided with necessary training. With shoestring budget use for operations in developing countries, it becomes evident to embrace OER resources.

A. Learning Management System (LMS)

An educationist view LMS as a web-based system used for administration and delivery of courses on various modes of study [3] [4] such as face-to-face, online and blended/hybrid. Student interaction is through online forums and virtual learning tool such as Big Blue Button (BBB), Zoom and Lecture Capture System. In addition, student participation in the course is through various online assessments comprising of quizzes, lessons, assignments, Perusall readings, online forum homework activities and peer assessments which can be delivered through LMS [5] [6] [7] [8] [9] [10] [11]. One of the popular LMS used by HEIs is the Modular Object Oriented Dynamic Learning Environment (Moodle) [7].

B. Online Peer Assessment

USP has moved to flexible learning where various courses are now offered via online and blended modes, as such academics are continuously faced with the challenge of providing timely feedback to students. As such e-Assessments area of research is now a continuous researched field. According to [1], peer assessment is when students' grade and give feedback about the work of their peers against particular criteria provided by the lecturer. Moodle-LMS provides an OPA tool known as Workshop, which can be used to administer formative and summative assessments. The OPA tool via Moodle is a five-phase process, which needs to be administered as sequence of phases as shown in Fig 1. OPA is currently in its early stage of use in the Pacific region and recent studies have shown promising results [4] [3] [12] [13]. To the best of our knowledge, there is no study on academics' perceptions towards use of OPA in HEI. As such, the following paper will explore planning and development of online PD training for academics at USP. This online PD on OPA, creates future research opportunities from academics' perspectives in the field of OPA in HEI.

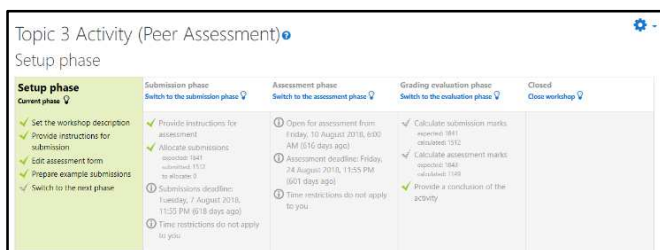


Fig. 1. Example of setup process for Moodle Workshop Tool [3].

C. Proposed OPA Framework

The OPA framework is one of our pioneer works on the use of OPA in large classes [12]. There are three stages involved in the proposed framework, stage 1 is assessment selection, stage 2 is PA aids and variables and stage 3 involves the use of Moodle workshop tool to design the OPA activity.

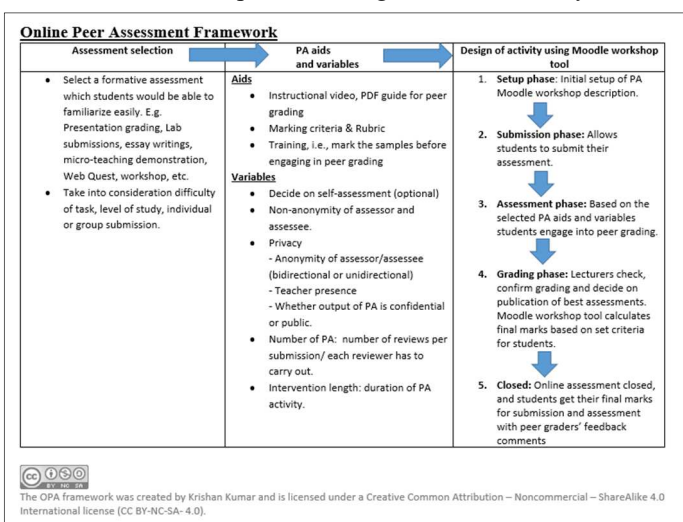


Fig. 2. PA framework [12]

The OPA framework enables academics to plan their OPA formative assessments taking into consideration of PA aids and variables, as this drives the overall success of OPA in their courses. Studies have confirmed that anonymous PA works well [14] [15] [16] [17] [18] in some cases. However,

some studies noted no significant effects [19] [20], while other studies favoured non-anonymous setting [21] [22]. Currently there are only two studies [4] [3] in the South Pacific context which has explored the use of anonymous OPA in an Information Technology and Literacy course. As such, this creates another gap on studies and creates research opportunities in other subject domains. To achieve this, the training of academics is starting point and further studies there after.

III. METHODOLOGY

In this study, we planned an online PD workshop for academics of USP to explore and provide the necessary understanding and skills of using OPA at HEI using the Moodle workshop tool.

A. Setting

The University of the South Pacific (USP) is a regional multi-campus higher education institution in the South Pacific jointly own by Cook Islands, Fiji, Kiribati, Marshall Islands, Nauru, Niue, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu, and Samoa, see Fig.3. Each member country houses a campus and small centers under the umbrella of their campus, whereas Fiji houses its main campus in Suva with two other campuses located in Lautoka and Labasa. With the emergent of flexible learning, students from regional campuses are able to take up courses in online and blended modes, whereas face-to-face mode courses are delivered mainly through Laucala, Alafua and Emalus campuses located in Fiji, Samoa and Vanuatu respectively. USP is using USPNet technology that connects all campuses through a satellite system for live video conferencing session with their respective course lecturers. The regional campus students comprise of 39% (12, 519) and main campus 61% (19, 581) of USP's student population [23], pg. 42.

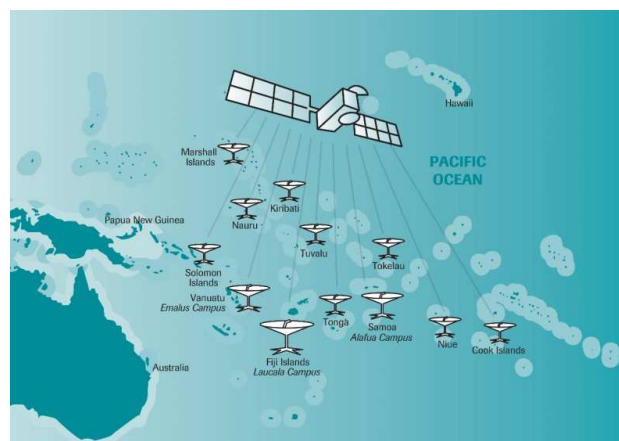


Fig. 3. Member countries of USP connected through USPNet [24]

B. Participants

The target participants of this online PD were academics comprising of Professors, Associate Professors, Senior Lecturers, Lecturers, Assistant Lecturers and Teaching Assistants. These academics are from six major schools and two interdisciplinary colleges and centers [25]:

- School of Accounting, Finance and Economics (SAFE)
- School of Business and Management (SBM)

- School of Information Technology, Engineering, Mathematics and Physics (STEMP)
- School of Agriculture, Geography, Environment, Ocean and Natural Sciences (SAGEONS)
- School of Law and Social Sciences (SOLASS)
- School of Pacific Arts, Communication and Education (SPACE)
- Pacific Technical and Further Education (PACIFIC TAFE)
- Pacific Centre of Environment and Sustainable Development (PACE-SD)

C. Tools and Resources Needed

Since the aim of this online PD was to upskill academics at USP, it made sense that it was carried out in Moodle considering that it's the university's LMS platform. The required tools for the development of this online PD on Moodle were:

- Book – to create the multi-page resources in both textual and multimedia format.
- Discussion forums – to enable active participation.
- Perusall - used for e-tivity 2, with intention to capture benefits and challenges of using OPA.
- YouTube reusable videos
- Assignment drop-box – to capture student assessment in various formats e-tivity 3.
- Moodle Workshop Tool - for e-tivity 4, where participants get to experience the learning process.
- Feedback – for Online PD workshop evaluation.

D. Plan of Modules

The Online PD on OPA comprised of three modules and four major assessments. The duration of the Online PD was three-weeks long with six hours per week to be committed by participants. Table I, shows the module names with learning outcomes and respective assessments. In addition, there was also one-hour online session through Zoom per week, where participants could ask questions.

The institutionally mandated Survey on Teaching Staff Readiness for Using Moodle by USP [26] was referred to as a basis of selecting the PD approach. This survey, with 100 teaching staff respondents highlighted two things that informed the decision to utilize the proposed PD approach. Firstly, that an overwhelming proportion of respondents (85%) fell under the 0-2 range on a scale of 0 (Not competent at all) to 5 (Highly Competent) when indicating their level of competency relative to setting up workshop activities for peer assessment activities. In addition, 67% of the respondents indicated preference for the workshop format when learning about Moodle and related technologies. It must be indicated that the preference was for workshops in the face to face mode. However, due to COVID-19 restrictions, a 100% online format was decided upon but with inclusion of face to face interaction through use of synchronous technology such as Zoom. With due consideration of the low levels of competency indicated in the survey, an instructional scaffolding approach derived from Vygotsky's Theory of Zone of Proximal Development and Scaffolding [27] was utilized to ensure that the objectives were holistically and sustainably met with theoretical grounding established in the

beginning (Module 1), followed by application and familiarization of the workshop tool (Module 2) culminating in creation and reflection (Module 3).

The three learning outcomes of the Online PD on OPA were:

- Demonstrate their understanding of what Online Peer Assessment (OPA) all about.
- Design their online peer assessment task and rubric with reference to the OPA framework.
- Participate and reflect on the use of OPA through the use of the Moodle Workshop Tool.

Table 1 shows the module level learning outcomes with its topics and aligned e-tivities.

TABLE I. SHOWS THE MODULE LEVEL LEARNING OUTCOMES AND TOPICS

Week	Workshop module level outcomes	Module Topic & Resources	e-tivities
1	<p>Module 1</p> <ul style="list-style-type: none"> - Explain Online Peer Assessment (OPA). - Explore current practices of using OPA. - Discuss the benefits and challenges of using OPA. 	<p>Topic Module 1: Understanding the Peer Assessment Strategy</p> <p>Resources</p> <ul style="list-style-type: none"> • What is OPA? • Perusall Guide: <ul style="list-style-type: none"> - How to annotate - Getting started with Perusall (students) - Reading (on Perusall): Chie Adachi, Joanna Hong-Meng Tai & Philip Dawson (2018). Academics' perceptions of the benefits and challenges of self and peer assessment in higher education. <i>Assessment & Evaluation in Higher Education</i>, 43:2, 294-306. 	<p>E-tivity - 1 Web quest – search for one (1) current practice on the web</p> <p>E-tivity - 2 Perusall activity based on prescribed reading (s) centred around OPA, benefits and challenges</p>
2	<p>Module 2</p> <ul style="list-style-type: none"> - Illustrate how the Moodle Workshop tool functions. - Identify the logistics of implementing the OPA using proposed framework. - Demonstrate the understanding of rubric creation using Moodle Workshop tool. 	<p>Topic: Module 2: Applying the Proposed framework for implementing OPA using Moodle Workshop Tool</p> <p>Resources</p> <ul style="list-style-type: none"> • Moodle Workshop Tool – how it functions • OPA Framework • Setting Anonymity in Moodle Workshop Tool • Grading Strategy 	<p>E-tivity - 3 Create a guide showing the steps in creating a OPA using Moodle Workshop Tool as a teacher.</p>

Week	Workshop module level outcomes	Module Topic & Resources	e-tivities
3	<p>Module 3</p> <ul style="list-style-type: none"> - Use the proposed OPA framework to create an OPA task. - Create a marking rubric for your OPA task. - Participate in the OPA grading process to gain more insights on how it works. - Reflect on the insights derived through the OPA grading process. 	<p>Topic: Module 3: Develop and Participate an Assessment for OPA.</p> <p>Resources:</p> <ul style="list-style-type: none"> • Moodle Workshop Introduction Video • Sample Assessments x 3 • Sample Marking Guides x 3 	<p>E-tivity - 4 Participants to complete a project titled: <i>My OPA Project</i>:</p> <ul style="list-style-type: none"> (a) create a rubric, (b) create a PA formative task (c) submit & grade Workshop (d) Feedback survey on the use of OPA.

E. Design

The design of the workshop followed a linear approach. The whole planning started with a course plan that helped us in formulating an outline. From this outline, we were able to determine the tools and materials that was needed for the workshop. The workshop design team helped in formulating the concept into a workshop prototype, which was rigorously tested, before the OPA workshop was delivered.

In addition, a post workshop webinar is planned whereby participants will share their practices in implementing what was covered in the workshop. Obstacles to implementing what was learnt will also be featured providing a holistic evaluation process to measure the impact but more importantly improve the workshop design in its future offers.

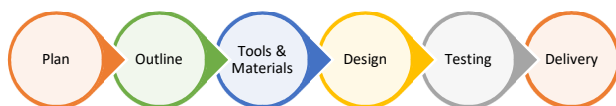


Fig. 4. OPA workshop design approach

IV. CONCLUSION & FUTURE WORK

A difficulty that was faced was finding the right date for delivery. From past experiences in conducting other online and blended workshops, the good time to conduct online PD is during the semester breaks. As this is most the suitable option for academics. The promotion and registration of this online PD were done through generic emails, which was sent to all staff. This online PA on OPA was intended for teaching in HEIs and this proposed module could be easily developed by various HEIs around the world. This study is a work-in-progress and we are planning to provide a complete finding in upcoming publications.

Our future work will focus on building cases of various types of formative assessments where OPA could be used in different subject domains. Additionally, the result of this proposed Online PD on OPA, and a post survey is our intended future outcome of this project.

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