STUDENTS' PERCEPTION TOWARD THE INVOLVEMENT IN DEVELOPING INSTRUCTIONAL VIDEOS USING POWTOON TOOL

M.E. Mohyaldinn[1], A. Kaur[2], H.S. Alhassan[3], D. Kansan[1], M.L. Hasan[1], A. Yousif[3] and M.A. Ayoub[1]

[1]Department of Petroleum Engineering, Universiti Teknologi PETRONAS, Malaysia
[2]School of Education and Modern Languages, College of Arts and Sciences, Universiti Utara Malaysia
[3]Department of Computer and Information Sciences, Universiti Teknologi PETRONAS, Malaysia
[4]Department of Electrical and Electronics Engineering, Universiti Teknologi PETRONAS, Malaysia

Email: mysara.eissa@utp.edu.my

ABSTRACT

Student-faculty partnership has proven to significantly enhance many attributes in the teaching-learning process due to its ability to expose students to higher levels of engagement, enforcing the confidence, motivation, and responsibility of the students, as well as the establishment of a friendly and tight relationship between the students and faculties. Nevertheless, the student-faculty partnership is not only limitedly practised in Malaysia, but also the occasionally reported practices have involved matured postgraduate students with educational background and significant experience in teaching and learning. In this study, the student-faculty partnership has been implemented for undergraduate students to enhance the process of teaching and learning. This is done by involving the students in developing instructional videos using POWTOON tool. The study analysed three sources of data, viz. a survey questionnaire, online quiz marks, and test 1 marks, to assess the students' perception toward this experience as well as to evaluate its impact on their academic performance. The findings indicate that student-faculty partnership has significantly improved the students' learning and soft skills. In fact, the students responded positively to the activities conducted throughout this experience and gave positive feedback about the developed instructional materials. As an implication of this study, we strongly believe that the findings will serve as a good start for spreading the practice of the partnership of undergraduate students with faculties in Malaysian universities.

Keywords: *Partnership, learning, improvement, engagement*

INTRODUCTION

Students as a partner (SaP) is a term introduced recently to the teaching and learning area for describing a high level of students' engagement in the teaching process for better enforcement of their learning. It is suggested that the engagement of students in teaching and learning can be divided into four steps, starting from a consultation at the lowest level and partnership at the highest level [1]. The partnership is described as the teaching activities that involve a collaboration between the educator (or the whole department/ institution) and the student [1].

There are several definitions and conceptual descriptions of students as partners (SaP) in the literature. It is defined as "investing students with the power to co-create, not just knowledge or learning, but the higher education institution itself" [2]. Cook-Sather et al. [3] defined the student-faculty partnership as "a collaborative, reciprocal process through which all participants have the opportunity to contribute

equally, although not necessarily in the same ways, to curricular or pedagogical conceptualisation, decision making, implementation, investigation, or analysis". It follows that students as a partner imply that a student is allowed and encouraged to make a real and significant role in the teaching process by working as a partner to his/her educator. Amrita Kaur et al. [4] suggested that "in the area of undergraduate education, student-faculty partnership can be viewed as a fairly new approach that has emerged as an extension of cooperative learning or similar collaborative learning approaches which, however, were limited to only students working together in groups to construct their own learning."

There are different methods and frameworks suggested forming a faculty-student partnership. In general, the engagement can take place in the form of participation as pedagogical consultants following the Students as Learners and Teachers (SaLT) model proposed by Cook-Sather et al. [3] or students may involve in assessment/curriculum design activities [5]. Healey et. al [6] proposed a conceptual model for implementing the student partnership in teaching and learning. They suggested that students can act as partners via their involvement in one of four areas, as shown in Figure 1.

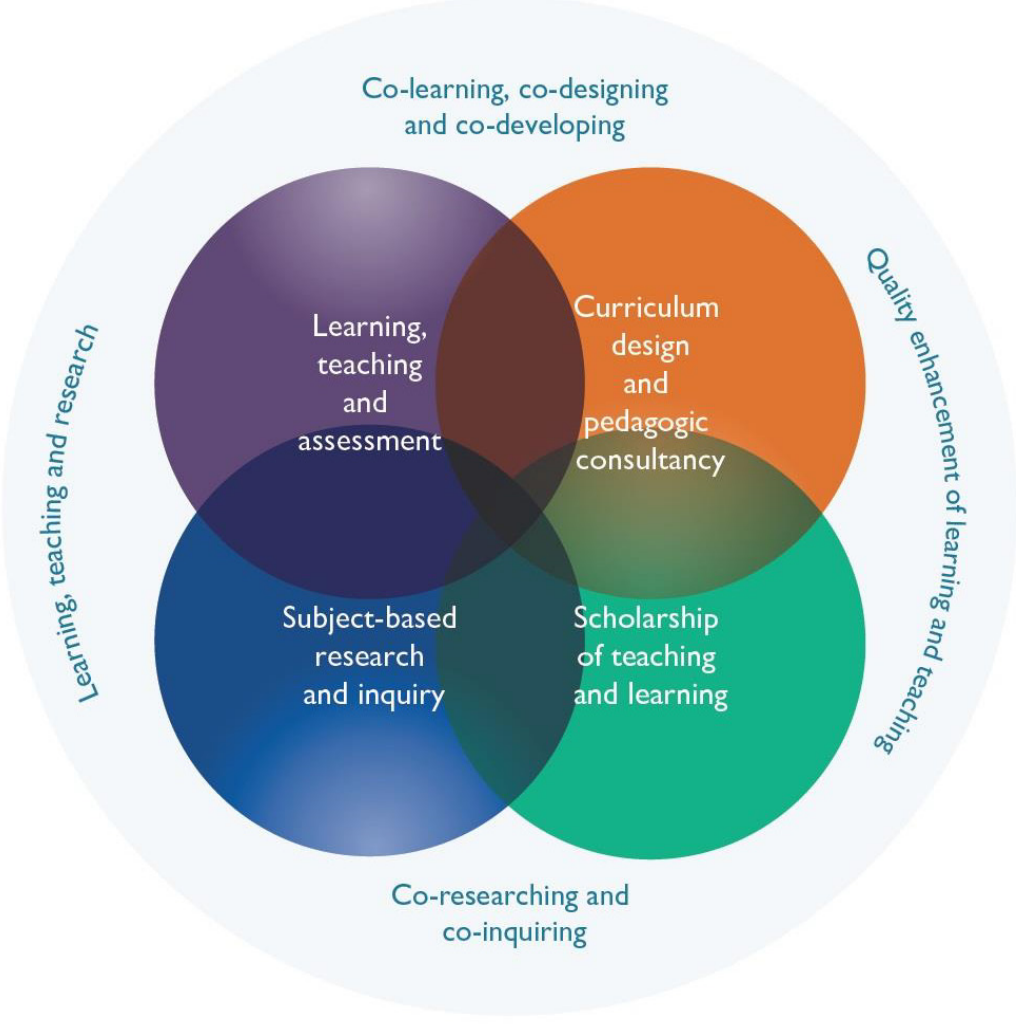

Figure 1 The conceptual model for partnership in teaching and learning as presented by Healey et al. [6]

In Malaysia, a unique and valuable study about SaP was published by Kaur et al. [4], in which postgraduate students worked as a partner with their instructors in designing instruction. The current work is another attempt to engage students to work as partners in creating digital online instructional materials. This paper presents and analyses the students' perception of their experience of using POWTOON tool to create short animation videos that can serve as instructional materials. The students involved in the partnership are undergraduates, 3rd year second semester, students who were taking a core petroleum engineering subject in a Malaysian university. The results of student responses to a survey questionnaire along with their course work results indicate that most of the students have a positive impression on their experience of working as a partner with the lecturer.

This work is a part of ongoing research that ultimately aimed to create attractive and beneficial digital materials for in-class and flipped learning using different tools. This manuscript seeks not to evaluate the created videos as teaching materials. Instead, it aims to measure the students' perception of partnering with their instructor in creating digital instructional materials using POWTOON video animation creator tool and to assess to what extent they have benefited from this experience in improving their learning.

DESCRIPTIONS OF STUDY

In this work, students were partnering with the lecturer of one core course in petroleum engineering department at a Malaysia university. Two batches taking the same course have enrolled in this study. The first batch (batch 1), consisting of 57 students, was divided into 11 groups. Each group was asked to cover one topic deeply and describe it graphically, using freehand or computer-assisted sketching tool, and then pass their sketch to one group from the second batch (batch 2). The second batch, consisting of 110 students, was divided into 11 groups, each group was asked to utilise the material passed to them from batch 1 and collect additional related material to create a short video using POWTOON online animation video creator. The created videos are assumed to serve as instructional materials in the future and can be used for in-class learning and/or for flipping classes. Three sources of data were used to assess the students' perception on their partnering in creating the videos, the first source of data (DS1) is students' responses to survey questionnaire which has been created using google form and made accessed to the students through the university e-learning system. The second source of data (DS2) is the student results in an online quiz, while the third source of data (DS3) is the student results in an in-class test. More details about the data are provided in the Data Collection section.

Table 1 Nationalities of the students enrolled in the course

Country	Malaysia	Myanmar	S. Sudan	Pakistan	Indonesia	Somalia	Sudan	Kenya	total
No of students	104	5	3	2	2	1	1	1	119

Table 2 Genders of the students enrolled in the course

Gender	Male	Female
No of students	97	22

METHODS

Participants

The students who participated in this study were third-year first semester undergraduate, taking the course (Production Engineering I) at Petroleum Engineering Discipline at a private university located in the centre of Malaysia. The age range of all students is 20-22 years, with the majority of students aged 21 years old. The nationalities and genders of the students enrolled in the course are shown in Table 1 and Table 2, respectively.

Coursework (Quiz and Test) records for almost all students were used for data analysis to evaluate SaP efficiency for learning improvement. Nonetheless, because the students' enrolment in responding to the online questionnaire is on volunteering basis as stated explicitly on the distributed online form, so limited responses have been received (as will be discussed in the data collection section.

Procedures

Students as partners (SaP) is a term used recently to describe a real engagement of students in the teaching process which is believed to result in more efficient learning. In the current study, the students enrolled in the course Production Engineering I have contributed in creating online instructional materials using POWTOON animation video creator tool. The purpose of the created material was to serve as in-class teaching materials as well as flipped class materials for subsequent batches taking the same course. The materials were aimed to cover one (out of four) course learning outcome. Two batches taking the same course collaborated in creating the videos. The first batch were divided into 11 groups, with 5-6 students in each group. The second batch were also divided into 11 groups with 11-12 students in each group. Each group from the first batch was responsible for creating sketches or simplified drawings/layouts to describe a specific concept related to their topic and then handing out the created sketches to one group from the second batch. Each group from the second batch was responsible for creating the online videos utilising the materials handed out to them by the respective group from the first batch. Figure 2 shows the whole procedure of this work. The most upper part in Figure 2 shows the example of the work created by the first batch, followed by examples of the POWTOON video created by the second batch. The lower part of Figure 2 shows the evaluation methods used to assess the perception of the students on creating the videos.

The grouping of both batches was done based on the students' interest. After the groups were formed. Eleven topics that were believed to cover all the intended course learning outcome was posted in the e-learning system, and each topic was assigned to one group from batch one and another group from Batch 2. Throughout the work, the lecturer kept interacting with the students and give feedback comments in order to ensure a good quality of the work as well as the participation of all students in work.

Data collection

Data from three sources were used in this study, as shown in Table 3. The first data source is responses to an online questionnaire distributed through a Google form. In this questionnaire, students were responding to 10 questions (with addition few optional questions). The questionnaire has been made available to the whole class through the university e-learning system, and the students have been repeatedly asked to respond to the questionnaire (through class representatives and during a tutorial session).

Nonetheless, only 14 students responded to the questionnaire. This was most probably because the response to the form was on a voluntary base. The online questionnaire was made comprehensive to enable measuring the efficiency of the SaP in improving the students learning and their soft skills. The second and third data sources were collected from the student coursework results (viz one online quiz and one test). Almost all the questions in the online quiz (10 questions) fell within the course learning outcome for which the SaP activity was conducted. Test 1 covered about 50% of the course learning outcome for which the SaP activity was conducted. Almost all the students participated in the second and third data source.

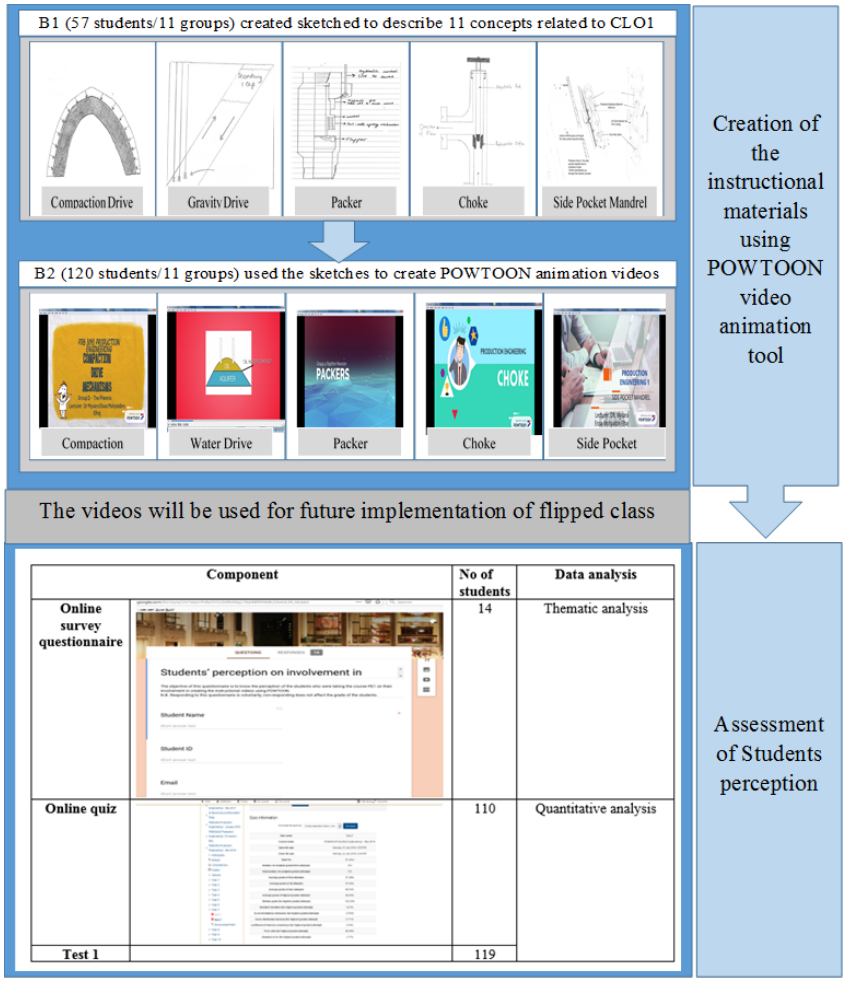

Figure 2 The procedure followed for video creation and data analysis

Table 3 The data sources

Component	No of students	Data analysis
Online survey questionnaire	14	Thematic analysis (Qualitative)
Online quiz	119	Quantitative analysis
Test 1	119	

Data analysis

Both quantitative and qualitative methods were used for data analysis. The online questionnaire collected responses were partially analysed using thematic analysis qualitative method [7]. Based on the responses, two main themes, viz. benefits and evaluation, were selected, as shown in Table 4. Under the theme benefits, there are two codes: learning improvement and soft skills improvement, whereas under the theme evaluation, there are two codes: teaching materials evaluation and activities evaluation.

Table 4 Themes and Codes

Themes	T1: Benefits	T2: Evaluation
Codes	Learning improvement Soft skills improvement	Teaching materials Activities

The data collected from the students' assessments (online quiz and test 1) was analysed using Microsoft Excel. The students' results were sorted based on their grades and then a Microsoft Excel pie chart is used to present the percentage of students obtained different grades.

FINDINGS

T1: Benefits

Learning improvement

Most of the students (93%) responded to the question in the online survey questionnaire (Do you think that the activity has improved your learning? how?) positively, confirming that the experience significantly improves their learning. As an example, Aisah Saiful said:

"Yes, because through video, I am exposing more information related to the subject."

Only one student (Jeremy Tan Ern How) responded to the question negatively, he said:

"Not really because other aspects for doing video overcome the actual knowledge we need to learn"

This finding is emphasising the suggestion in many previous studies which argued a positive effect of students partnership for enhancement of student learning that shown in a form of learning development [8], enforcing students-lecturer relationship [9], increasing enthusiasm and passion for learning [10] and sharing the authority and responsibility with the educator [11].

Soft skills improvement

Most of the students (78.5%) responded to the question "Do you think that the activity has improved your soft skills? How?" positively. The skills that the students claimed are improved include video editing, teamwork, and communication skills. One student responded as "not really", and another student (Keong Boon Kim) responded saying:

"Maybe not that much because we tasked ourselves within our area of specialization"

T2: Evaluation

Teaching materials

The teaching materials evaluated here were the sketch drawings and the associated text material prepared by the first batch. To evaluate the quality of these materials, the second batch, who utilised these materials to create the videos, were asked the following question: How do you evaluate the sketching material made by the parallel batch? The responses to this question were different from group to group. In instance, Aisah Saiful seemed to be very happy about the material that she evaluated, saying *"It is really great".* However, two students seemed to be not satisfied with the materials. For instance, Nur Alyaa Nadhirah Mohd Roselee responded by saying:

"Not helping at all. Only 1 page of sketching with very little info. When we look up online, there's way more than that. And we were asked to acknowledge them although I can pretty say they did nothing to be acknowledged. We can't even use their sketching for the video."

Activities

To get the students' perception about the activities conducted throughout this work, the students have asked a simple question, whether they like or dislike these activities. Thirteen students (93%) responded positively while one student responded negatively, as shown in Figure 3.

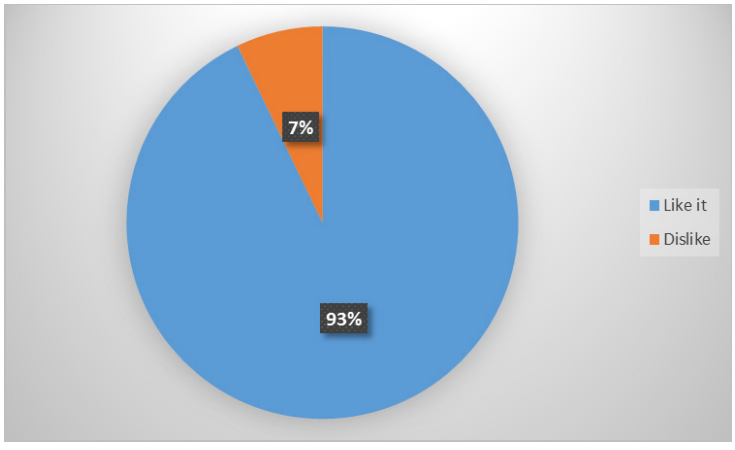

Figure 3 Students' perception of the activities

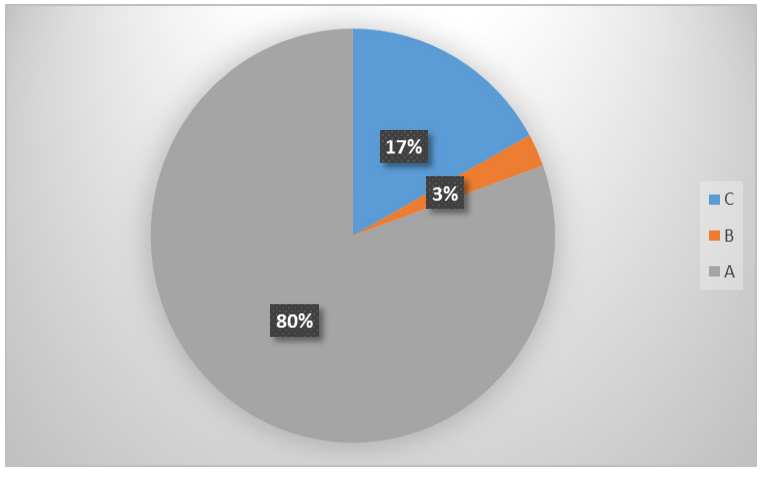

Figure 4 The students result in the online quiz

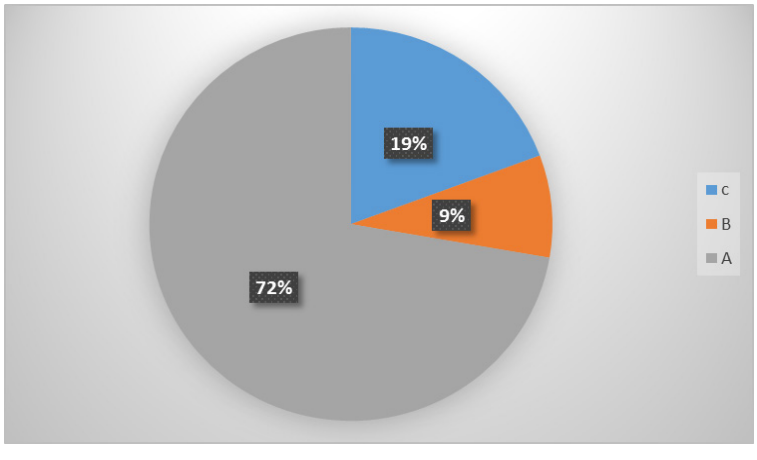

Figure 5 The students result in Test 1

Evaluation of learning development using the Coursework results

As stated in the Data Selection section, two sources of data were used from the students' coursework results. As shown in Figure 4 and Figure 5, the students perform well in both the online quiz and test 1. In both coursework components, most of the students obtained grade A, and none of the students got grades lower than C.

DISCUSSION

The main objective of this work was to measure and evaluate the perception of undergraduate students in a Malaysian university on the partnership with the lecturer for creating animated videos that can be used as in-class and/or flipped class instructional materials. The findings in this study were found in agreement with the outcomes presented by many researchers [3], [8], [10]-[11]. The analysis of three data sources (viz. survey questionnaire, online quiz, and test results) revealed that most of the students are satisfied with their involvement as partners with their educator and they believed that this experience has positively contributed in their learning and soft skills. Besides, most of the students have given a positive impression about the instructional materials created from this work, and the activates they performed with their educator at a different stage throughout this experience. 93% and 78.5% of the students who responded to the survey questionnaire have commented positively about the impact of this experience on their learning improvement and soft skill improvement, respectively. This finding agrees reasonably with the results presented by many authors. In instance, one of the latest published articles suggested that students' partnership can enhance their learning performance due to its positive impact on "three cluster of outcomes", namely engagement, awareness, and enhancement.

CONCLUSION

The study is considered as one of the few studies which target student as partner (SaP) trials conducted in Malaysia. To the authors best of knowledge, none of the previous SaP attempts in Malaysia has involved undergraduate students with the non-education background, since partnering with a faculty requires enough maturity and sufficient knowledge of teaching and learning practice. This point has been discussed in a previous study conducted in Malaysia by Kaur et al. [4] in which they reported:

"We see a possibility that the positive results reported in this study can be attributed to students' prior work experiences which facilitated them to function fairly effectively during this partnership."

Because of that, they recommended exploring "this approach (i.e. student partnership) with undergraduate students to get an in-depth understanding of this practice". Considering all these challenges (lack of student maturity along with non-educational background), we believe that the results presented in this paper be considered as a good start for spreading the practice of the partnership of undergraduate students with faculties in Malaysian universities.

The analysis of the collected data indicated that valuable benefits can be obtained from the implementation of the student as a partner (SaP) concept. The following conclusions can be drawn from the results' analysis,

1. Most of the students (93%) confirmed that their participation in SaP had significantly improved their learning. This finding emphasizes that the suggestion in many previous studies which argued a positive effect of students partnership for enhancement of student learning that shown in the form of learning development, enforcing students-lecturer relationship), increasing enthusiasm and passion for learning, and sharing the authority and responsibility with the educator.

2. The SaP experience revealed a significant improvement of the soft skills as confirmed by most of the questioned students (78.5%). The skills that the students claimed to have improved included video editing, teamwork, and communication skills.

3. The SaP experience indicates that the students could contribute to developing solid instructional materials that can be used by the educator for future teaching.

4. Most of the students participated in the SaP experience (93%) showed their interest and happiness for their participation.

5. The students' academic performance was significantly improved as a result of their participation in the SaP experience. This was indicated by the fact that, in both coursework components, most of the students get grade A, and none of the students gets below grade C.

ACKNOWLEDGEMENT

The authors would like to thank the Center for Excellence in Teaching and Learning (CETaL) at Universiti Teknologi PETRONAS for providing the technical and financial supports. This work was conducted utilising a SoTL project grant no. 0152AA-A26.

REFERENCES

[1] NUS & HEA, *Student Engagement Toolkit [Internet]. National union of students and higher education academy,* 2011. Retrieved from https://www.nusconnect.org.uk/the-student-engagement-partnership-tsep/student-engagement-toolkit.

[2] NUS. *A manifesto for partnership.* London: National Union of Students, 2012. Retrieved from www.nusconnect.org.uk/campaigns/highereducation/partnership/a-manifesto-for-partnerships.

[3] A. Cook-Sather, C. Bovill, P. Felten, *Engaging students as partners in learning and teaching: A guide for faculty,* San Francisco: Jossey-Bass, 2014.

[4] A. Kaura, R. A. Hashima & M. Kaurb, "Students' experiences of co-creating classroom instruction with faculty- a case study in eastern context", *Teaching in Higher Education*, pp. 1-17, 2018.

[5] C. Bovill, C.J. Bulley & K. Morss, "Engaging and empowering first-year students through curriculum design: Perspectives from the literature", *Teaching in Higher Education,* 16, 2, pp. 197-209, 2011.

[6] M. Healey, A. Flint, & K. Harrington, *Engagement through partnership: students as partners in learning and teaching in higher education*, York: The Higher Education Academy, 2014.

[7] M. Maguire & B. Delahunt, "Doing a thematic analysis: A practical, step-by-step", *AISHE-J,* 9, 3, pp. 3351-354, 2017.

[8] J. Jarvis, C. "Staff-student partnership in practice in higher education: the impact on learning and teaching", 6th International Conference on University Learning and Teaching, *Procedia Social and Behavioral Sciences*, 9, pp. 220-225, 2013.

[9] E. Barnes, L.Goldring, A Berwick & J. Wood, "A collaborative evaluation of student-staff partnership in inquiry-based educational development", *Staff-student partnerships in Higher Education*, pp. 16-30, 2010. https://www.academia.edu/556049/A_Collaborative_Evaluation_of_StudentStaff_Partnership_in_Inquiry-Based_Educational_Development.

[10] S. S. Hoo, "Students as partners in research and restructuring schools", *The Educational Forum,* 4, 57, pp. 386-93, 1993.

[11] A.Cook-Sather & P. Agu, "Student consultants of color and faculty members, working together toward culturally sustaining pedagogy", *To improve the academy: resources for faculty, instructional, and organizational development*, San Francisco: Jossey-Bass, pp. 271-285, 2017.