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VIRTUAL SYMPOSIUM ON TEACHING & LEARNING (VSTL) 2020

Redefining the Practice of Teaching and Learning

E-PROCEEDING

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INTRODUCTION

The very first Virtual Symposium on Teaching and Learning 2020 has been organised by the Academy of Language Studies, UiTM Cawangan Johor Kampus Pasir Gudang in collaboration with Unit Penulisan dan Penerbitan, BPJIA UiTM Cawangan Johor Kampus Pasir Gudang.

This symposium has provided an opportunity for researchers and educators to share their ideas and insights in the name of education. This symposium has also provided a platform for the exchange of knowledge and expertise in relevant fields and promoted exploration of potential collaboration for future research.

This event has the goal to bring academicians and researchers in education together from across the globe.

Researchers and authors have been invited to submit original high-quality extended abstracts. Papers are solicited on, but not limited to:

- a. E-Learning
- b. Innovation and Creativity in Teaching and Learning
- c. Assessment and Evaluation in Teaching and Learning
- d. Best Practices in Teaching and Learning
- e. Others (related to Teaching and Learning)

All accepted extended abstracts have been presented by participants on the symposium day via Google Meet.

All accepted, registered and presented extended abstracts have been published in this e-proceeding with e-ISBN. Authors of selected extended abstracts will be invited after the symposium to submit a full paper for Scopus-indexed Journals/ a special issue in the Insight Journal UiTM Cawangan Johor. Best Papers and Best Presentations have also been awarded in this event.

FOREWORD BY ASSISTANT RECTOR



Dr. Haryana binti Mohd Hairi

Assistant Rector, UiTM Pasir Gudang

Assalamualaikum wbt and good day everyone.

I am pleased to welcome all of you to the Virtual Symposium on Teaching and Learning, VSTL, 2020. Congratulations for your participation, fruitful sharing session and discussion for the symposium.

Today, we have witnessed educators across institutions, disciplines and expertise, coming together to share the insights, experience, and practices in teaching and learning. I bet that everyone has had your fair share of not only getting inputs and ideas from others, but also share your own perspectives in the field of teaching and learning.

Ladies and gentlemen,

VSTL 2020 is one of the many virtual academic get-togethers, which could have been organized in the conventional way, with face-to-face meetings and sessions. However, considering the many aspects in our current situation, with the seemingly unending COVID-19 fiasco, this symposium is successfully done on a virtual platform today without neglecting the ultimate purpose of such programs. I believe that all of us today have gained so many positive inputs for various aspects in teaching and learning even without physically meeting each other, which is no less than if the program is done conventionally.

It is high time that such an event took place to highlight the remarkable contribution, in which “the new norm” of teaching and learning took place in our current education situation. I am proud to know that, through a glance at the list of presentations planned for today, reveals the amazing diversity of these areas. Congratulations to all of you.

COVID-19 pandemic has not only changed our way of teaching and learning, but also forced us to become more creative and innovative. In some cases, we could not meet our students face to face, and had to use virtual methods, as how we met today to carry out our duty as teachers and educators. This can be easy for some of us, but a mounting task for others. However, the responsibility of educating our learners still needs to be carried out, in one way or the other, no matter how challenging it is. Thus, the purpose of this symposium is for us to

not only share the traditional practices but also new methods and techniques in online or distance learning.

I hope that VSTL 2020 has been a good platform to inspire us, the educators to try out new teaching techniques and the experts to share their insight and valuable knowledge in this area. This could also be the route to a unique opportunity to share and exchange with counterparts from different specialties the advancements in your field. I also hope that our meeting will not stop today and can promote exploration of potential collaboration for future research.

Ladies and gentlemen,

On behalf of the committees and UiTM Cawangan Johor, I would like to thank all of you for your support and I hope that you have had fruitful and rewarding exchanges from this program. I would like to also congratulate the Academy of Language Studies, UiTM Cawangan Johor, Kampus Pasir Gudang for organizing the symposium, together with Unit Penulisan dan Penerbitan of BPJIA, UiTM Cawangan Johor Kampus Pasir Gudang. It is my hope to see more programs such as this in the future.

Before I end my speech, I would like to share a quote by Phil Collins;

“In learning you will teach, and in teaching you will learn”. May all of us here never stop learning, and continue inspiring the learners, and each other in our jihad to share and value the knowledge that we have.

I hereby officiate the closing ceremony and announcement of awards of Virtual Symposium on Teaching and Learning 2020.

All the best to everyone, and may all our effort be blessed. Thank you.

Level of Motivation in Project-based Learning of JKE Students In POLISAS

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Abstract

In education, appropriate teaching method is very important to determine the students' motivation during teaching and learning process. Therefore, a paradigm shift needs to be implemented from teacher-based approach to student-based approach in order to enhance students' intrinsic motivation. Hence, project-based learning is one of the student-based teaching methods that will enhance students' intrinsic motivation. Typically, there are five elements in project-based learning which are autonomy, authentic problem, skills, cooperative learning and teacher's roles. Therefore, this research is aimed to determine the level of intrinsic motivation that is contributed by each element of project-based learning. The samples were selected randomly comprising 115 fourth semester students undertaking Diploma in Electrical Engineering during the December 2019 session from Polytechnic of Sultan Haji Ahmad Shah. This research was a survey that utilised questionnaire as the research instrument. Through Statistical Package for Social Science (SPSS) Version 26.0, the collected data was analysed for mean scores. The results showed that in project-based learning, all elements contributed to high level of intrinsic motivation. Based on the research findings, future research on project-based learning should be continued so that the project based-learning can be used as one of the teaching methods that will enhance students' interest and motivation in line with advancement of education system.

Keywords: Teaching method, project-based learning, intrinsic motivation

Introduction

In education, a lecturer becomes an effective moderator to all teaching and learning processes either in the classroom or outside the classroom. To create effective teaching and learning process, lecturers need to use appropriate teaching approach to increase students' motivation. It is a must for every lecturer to know how to motivate students so that they are truly engaged in learning process. Project-based learning integrates the concept of knowing and doing (Markham, 2011). Students do not only gain the knowledge and core elements of curriculum, but what is important is that they apply what they know to solve the real problem and make decisions. Project-based learning helps students to gain skills and enhance their ability to work in group and spend their times wisely (Ang & Ngu, 2014). Project-based learning gives many benefits such as enhancing the motivation of students if lecturers have great motivation to face it and increase it in the classroom (Lam et al., 2009).

Problem statement

The motivation of students to learn was low when the things they learned were irrelevant to the real life (Shah Rizal, 2005). Hence, students need changes in learning especially technical education to shift from teacher-based approach to student-based approach. To encourage students to be active in learning, lecturers in the higher learning institutions have to create intrinsic orientation inside students. The lecturers should guide students to use natural energy to enhance intrinsic motivation. This can be done by changing the students from external rewards to enthusiasm in learning. There are many approaches that can be used to enhance students' motivation for those who are lack of motivation (Tileston, 2004).

Research Objective

The objectives of the research are as follow:

- i. To determine the level of motivation that is contributed by autonomy element in project-based learning.
- ii. To determine the level of motivation that is contributed by authentic problem element in project-based learning.
- iii. To determine the level of motivation that is contributed by skills element in project-based learning.
- iv. To determine the level of motivation that is contributed by cooperative learning element in project-based learning.
- v. To determine the level of motivation that is contributed by teacher's role element in project-based learning.

Literature Review

Students-centered learning is a teaching environment in which students are active in the learning process (Esah, 2004). The students do not only listen to the teacher's explanation, but they are also engaged in activities such as discussion, problem solving, drawing and so on. The interaction between students and lecturer creates a harmony and conducive situation for learning.

According to Solomon (2006), project-based learning is a progressive teaching style and involves students in cooperative learning to solve authentic and challenging problems. Project-based learning believes that it can increase the mind of students (Katz dan Chard, 2000). Project-based learning is a student-based strategy that encourages students to focus on real world project that can increase their motivation. The projects do not only cover knowledge or technical issues, but practical skills too (Macias-Guarasa, 2006).

Motivation is a combination of motive and action. Motivation is an encouragement to act (Asmadi, 2000). According to Muralidharan (2006), motivation is defined as preparation to achieve the goals and capability to fulfill needs. Intrinsic means in nature or inner. This motivation comes from the inside of an individual. When it is related to learning, an individual is forced to learn by a motive to understand that is caused by curiosity (Putter et. al., 2002).

Research Methodology

This is a quantitative research that used questionnaire as the instrument to obtain data from the respondents. The samples were selected randomly comprising 115 fourth semester students undertaking Diploma in Electrical Engineering during the December 2019 session from Polytechnic of Sultan Haji Ahmad Shah (POLISAS). The data were analysed using mean scores to identify the level of intrinsic motivation.

Research Findings and Discussion

Table 1 shows the mean scores and level of motivation for elements of problem-based learning among students in JKE. Firstly, the level of intrinsic motivation is highly contributed by autonomy element which is 4.34. This is in line with the research by Henry (1994) that autonomy is based on student's interest in which students can control the learning process that will increase their motivation. The autonomy to choose group member gives satisfaction to them because the group members can help and give full cooperation to complete the project.

Secondly, the level of intrinsic motivation is highly contributed by autonomy authentic problem which is 4.34. According to Gulbahar & Tinmaz (2006), the students in project-based learning environment are dealing with authentic problem. When students can identify the problems, their minds and thoughts are being challenged. Hence, they will attempt to find solution to overcome the problem.

The level of intrinsic motivation is highly contributed by skills element which is 4.06. The finding supports the research by Thomas (2000) that the project involves students in research process consisting designing, decision making, searching and problem solving, exploring and model building. These skills are important for engineers.

The level of intrinsic motivation is highly contributed by cooperative learning element which is 4.26. The finding is in line with Macraken (2005) that cooperative learning can increase interest, motivation, success, creativity, understanding and similarity of students. Each group member is aware of one's roles and responsibilities. Discussion with group members gives chances to exchange and share views among themselves.

Last but not least, the level of intrinsic motivation is highly contributed by teacher's roles element which is 4.24. This is in line with Frank et., al. (2000) that lecturers do not only give lesson to the students but enhance motivation, give guidance and help students to build their own knowledge. Besides that, discussion with students also encourages students to be actively involved in implementing the project. Furthermore, the lecturer can monitor the progress of the students' projects from time to time so that the project could be completed on time. This is opposed to the research by Ainon & Abdullah (2002) that a lecturer becomes a motivator to students when positive relationship exists between students and lecturer.

Table 1
Mean scores and level of motivation for elements of problem-based learning

Elements	Mean	Level of Motivation
Autonomy	4.34	High
Authentic problem	4.04	High
Skills	4.06	High
Cooperative learning	4.26	High
Teacher's role	4.24	High

Conclusion and Implication

The research findings showed that all elements which are autonomy, authentic problem, skills, cooperative learning and teacher's roles contributed to high level of intrinsic motivation among students in Electrical Engineering Department when doing projects. In terms of autonomy, the students who are exercising it while doing a project can increase their effort to do their best because they can make their own decisions in all aspects. In terms of authentic problem, the students feel more motivated if they are exposed to the real problem and this has caused them to make an attempt to overcome the problem. Throughout the projects, the students will be more confident as they utilise the skills such as problem-solving, information-handling, decision-making and communication. Cooperative learning happens when a group of students working towards one goal or searching out solution for the problems. When sharing knowledge culture is applied in the project-based learning, their intrinsic motivation will be increased to be involved actively in the project. Instead, lecturers also play an important role in enhancing students' motivation in doing projects. Lecturers act as supervisors that always give support and advice in order to make sure that the project could be completed on time.

This research indirectly gives big implications to all authorities in education nowadays. In student context, project-based learning exposes students to dealing with authentic problems that leads them to figure out the possible solutions. They do not only gain the knowledge, but they are also equipped themselves with generic skills that become an added value to them in working environment. In lecturer context, it is recommended for lecturers to identify elements that will increase intrinsic motivation and improve the existing project-based learning according to the need of the courses and students' interests. For the Ministry of Education, project-based learning could be applied in curriculum and improved from time to time in line with the industrial needs and technologies. In industrial context, polytechnics can create continuous collaboration with industries to increase the activities in research and development.

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