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Akademi
Pengajian Bahasa

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.

VSTL22

Qualitative Analysis of Challenge- Based Learning on Programming Course

Zuraini Hanim Zaini & Easter Joseph

Universiti Teknologi PETRONAS
Zuraini.zaini@utp.edu.my

Abstract

In this study, Challenge-Based learning (CBL) is implemented in Visual programming course as a mean to improve students' programming skills. CBL provides authentic learning experience in collaborative group learning to enhance students' deeper conceptual learning. The researchers created Oh My Code Programing Competition (OMC) to employ the CBL in the Visual Programming Course. OMC is a CBL technology apps invention project which emphasises the innovation of the creation of an information system by instilling a business perspective in it. There are 3 main phases of CBL in OMC which consist of: 1) Challenge instructions by lecturer, 2) Preparations towards challenge 3) Delivery of complete challenge. A total of 50 students were involved in this study. The students' reflection was gathered through an open-ended online survey. The analysis was done using Co-occurrences Analysis. In summary, the OMC in Visual programming course demonstrates that the foundation in technology can make the students successfully take on the challenge to develop a system prototype with both technical and societal component. Through this CBL, students indirectly developed various professional skills such as teamwork communication and problem solving.

Introduction

Methods of learning are vital aspects to facilitate students in the learning process. Some people feel that studying in a group is more beneficial than individual learning while others probably have a different opinion. Challenge- Based Learning (CBL) is a mechanism for enhancing learning and organisational actions through meaningful learning experiences, enabling learners to use the technologies they use in their daily lives. CBL integrates independent learning and collaborative group learning in enhancing students' deeper conceptual learning. Educational research has shown that active learning focused on students can deliver a far deeper conceptual learning than conventional lectures [1]. With the assistance of a group-based learning environment, such as problem-based learning (PBL)[2], project-based learning (PBL)[3], or challenge-based learning (CBL), different technical functioning skills can be built by students such as problem-solving, written and oral communication, independent learning, teamwork and many more.

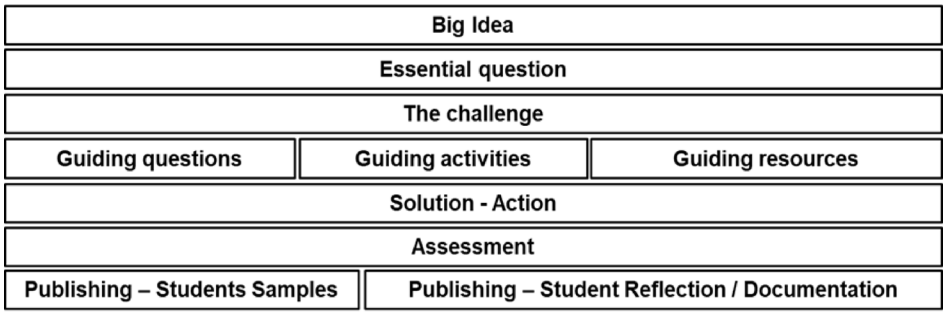
Problem Statement

The Visual Programming (VP) course introduces the fundamental concepts related to the principles of programming language, the programming structure and programming concept using object-oriented driven. As Programming Language course is considered as something new to young adult learners that have just left secondary school, the researchers adopted the Challenge-Based Learning. It is expected that students will not only be motivated to study and learn new knowledge outside the class, they will also be motivated to engage appropriately in group work as they are in a team. The focus of this study to investigate the experiences of students after they undergo challenge-based learning strategies in learning the programming course.

Literature Review

In CBL, there exists primary objectives shift from knowing concepts to using concepts. In regard to the educator, there is a need of a shift for them from an expert to a moderator [1]. The teacher will need to design and manage the overall instructional process instead of just dispensing information and concepts. As for students, they will need to shift from passive learners with limited responsibility for their learning to active learners with more significant responsibility for their learning. Fig 1 shows the activities in Challenge-Based Learning Framework [5].

Fig 1: Challenge-Based Learning Framework



Challenge Based Learning in Visual Programming course

The researches created Oh My Code Programing Competition (OMC) to employ the CBL in the Visual Programming Course. OMC is a CBL technology apps invention project which emphasises the innovation of the creation of an information system by instilling a business perspective in it. In this project, there are 3 main phases (Fig. 2): Finally, Students were required to answer an online survey to reflect their experience throughout the learning process

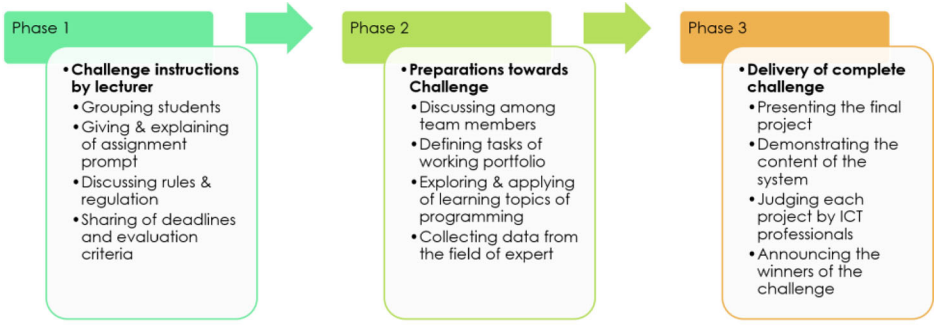


Fig.2: Details of Activities

Result and Discussion

A total of 50 students that were grouped into 12 teams were involved in this study. A qualitative data collection method using an open-ended online survey was used to collect the students' reflection. The analysis of the result is as follows:

a. *Students' experience during CBL*

The wordle in Fig 3 was generated based on students' answers when they were asked to describe their learning experience on programming after underwent Oh My code Programming competition.

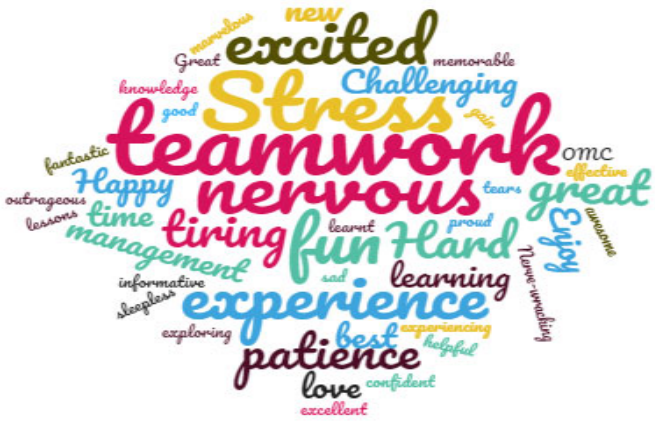


Fig 3: Most commonly used word in describing students' experience when learning programming using challenge-based learning

Based on the wordle, the most frequently mentioned words are teamwork, nervousness, experience, patience and stress.

b. *Effectiveness of CBL in understanding programming*

Students were also asked about the effectiveness of OMC in assisting them to understand programming. Most of the students agreed that their understanding of programming knowledge increased after underwent Oh My code programming competition which is a learning strategy using challenge-based learning. In order to develop a good business system, the prototype required them to explore more knowledge on the net. Co-occurrences Analysis was used to cluster the students' answers as in table 1.

Table 1
Emergent themes derived from students' reflection on the effectiveness of CBL on programming

Emergent Theme	**Exemplar quotes**
Improve understanding of programming	"*During class, we get to learn basic knowledge about VB or generally VS but by doing OMC, i got to discover more than what we have been taught. I love programming so OMC really gave me an experience in coding and designing* "
System development	"*OMC has influenced my understanding on programming by make use of database to built an good and efficient software*"
Knowledge exploration	"it makes me widen my knowledge on programming by doing research on youtube and other sources"

c. *Challenges that you came across while doing OMC project. Co-occurrences Analysis was used to cluster the answers.*

Students described their challenges towards the success of the group work particularly in developing functions for the main program. Here, students emphasised the importance of teamwork, brainstorming and even finding the best ways to develop the program. They wrote reflections of positive changes they encountered while completing the group tasks. These

adaptive characteristics were stimulated by the difficulty of solving the problem using programming and this process as linked directly to improve their communication as well as technical skills. For example, most students talked about increased motivation, knowledge, creativity and commitment in the findings. Co-occurrences Analysis used to cluster the students' answers as in table 2.

Table 2
Emergent themes derived from students' reflection on the effectiveness of CBL on programming

Emergent Theme	Exemplar quotes
Teamwork	*"Personally, i think one of the major challenges that i came across while doing OMC is teamwork. Since this year's OMC is held virtually, some people may neglect their work and not do as their tasked to do since we cant see each other physically."*
Communication	*"group members are far apart and hard to make discussion"*
Technical problem	*"sharing the vb project among teammates. When loading the project there always a problem even until deadlines."*

d. Skills generated throughout the process of developing and presenting the OMC project



Fig.2: Most commonly used words in describing generated skills after undergoing Challenge-based Learning

Based on the wordle, the most frequent words describing the skills they have gained and developed after learning programming through challenge-based learning are coding, presentation, problem-solving and management. From the students' reflections, it is shown that the students agreed that by adopting a challenge-based learning strategy in a programming course, it had successfully made them having a better understanding of the programming language, enrich students experience in the system development environment, develop better presentation skills, increase teamwork spirit as well as enhance their practical skills.

Conclusion

In a programming course, there are few skills required to prepare students for their future careers. Challenge-based learning strategy has allowed students to understand and tackle problem solving, knowledge exploration, teamwork and presentation skills. Through these processes, students will understand the programming knowledge that they have learned in the class. However, there are some

aspect that should be improved. A proper guideline in conducting this strategy is needed to ensure the smoothness of the process.

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