UNIVERSITI TEKNOLOGI MARA
Cawangan Johor
Kampus Pasir Gudang
Akademi
Pengajian Bahasa

VIRTUAL SYMPOSIUM ON TEACHING & LEARNING (VSTL) 2020

Redefining the Practice of Teaching and Learning

E-PROCEEDING

Copyright © 2020 Virtual Symposium on Teaching and Learning (VSTL2020) e-proceeding.

All rights reserved. No part of this Publication may be reproduced in any form or by electronic or mechanical means, including information storage and retrieval systems, or transmitted in any Form or by any means, without the prior Permission in writing from the Course Coordinator, Academy of Language Studies, Universiti Teknologi MARA Cawangan Johor, Kampus Pasir Gudang.

eISBN: 978-967-2354-12-3

First published, October 2020

EDITORIAL BOARD

Maisarah Noorezam

Nurul Hijah Jasman

Nur Alyani Khairol Anuar

Muhammad Irfan Mokhtar

Siti Aishah Taib

Fairuz Husna Mohd Yusof

Diana Othman

Dia Widyawati Amat

Haniza Sarijari

Zuraidah Sumery

Siti Zarikh Sofiah Abu Bakar

PUBLISHED BY:

Akademi Pengajian Bahasa,

Universiti Teknologi MARA Cawangan Johor,

Kampus Pasir Gudang

CONTENTS

Introduction	iii
Foreword by Assistant Rector	iv
Foreword by Course Coordinator	vi
List of Title & Participants	vii

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.

VSTL17

It Is Not About the Treasure, It Is About the Hunt – Engaging Students Through Gamification

*Nurul Asyikin Md Zaki, Syafiza Abd Hashib & Ummi Kalthum Ibrahim

Faculty of Chemical Engineering,Universiti Teknologi MARA 40450 Shah Alam, Selangor, Malaysia
asyikin6760@uitm.edu.my

Abstract

Implementation of the engineering programme has been primarily based on traditional approach to teaching and learning for decades. Nonetheless, immersive classroom learning that actively and cooperatively includes students' participation has been reported to enable them to improve their creativity, problem solving and critical thinking skills, which are required in the top ten skills today. The introduction of gamification of learning is an innovative approach in improving students' opportunities to learn and develop skills through a positive, engaging learning environment. The gamification strategy further seeks to bring about changes in the involvement and success of students in the Food Preservation Technology course. Perceptions and feedback from the students were obtained through questionnaires and reflective assessment. Most students prefer classroom approach with a gamification environment. Gamification creates flexibility and makes the course more enjoyable for both students and instructors.

Introduction

The effect of gamification on student motivation and performance is important, as there was increased interest in gamification at the college level (Hanus & Fox, 2015). Gamification refers to the use of elements of game design in a non- game setting, while game-based learning refers to the use of games for skills or knowledge acquisition. Points, leaderboards, and badges were the key elements in typical gamification of learning (Barata et al., 2013; Mekler et al., 2013). Other game elements such as avatars, three-dimensional environments, feedback, ranks, levels, competition, and time pressures (Deterding et al., 2011) should also be considered when designing gamification-integrated learning. Learning was effectively encouraged by introduction of games (Annetta et al., 2009; de Freitas, 2010; Liu et al., 2014; Papastergiou, 2009), and was proven to motivate students than non-gaming teaching methods (Barab et al., 2005; Papastergiou, 2009). Many universities and colleges have encouraged to incorporate gamification in classroom session to strategically attract tech-savvy students and increase their engagement. Apart from game-based learning, the use of gamification elements such as goals, rules, and feedback systems to engage students may have an impact on improving their literacy skills.

The objectives of the current study are, (1) to design gamification-integrated classroom activities, and (2) to analyse students' motivation and interest in learning through gamification. The hypothesis was that students taking parts in the Food Preservation Technology course were motivated and more engaged during gamification-integrated learning. Gamification in learning can also lead to deeper discussions with peers and instructors during classroom sessions. Furthermore, when students are actively encouraged to apply their knowledge during classroom sessions, it is also believed that this knowledge will retain better, thereby enabling them to better answer cognitively complex questions during exam (Bouwmeester et al, 2019).

Materials and Methods

This study was conducted in a Food Preservation Technology course (CBE658) which is an elective course of a 4-year Chemical Engineering program. This course was mostly taught using the incorporation of game-based and gamification of learning. Students were asked to plan their learning by watching recorded videos and reviewing lectures in the online Learning Management System (LMS) which is the UiTM MOOC platform, before face-to-face classroom sessions. Students must gain prior information and knowledge on the topics so active participation could happened during the game-based and gamification in classroom. Padlet and QR Code were used in a gamification session that was designed as a Treasure Hunt. Fig. 1 and Fig. 2 show the tools used in Treasure Hunt integrated as gamification during the learning process.

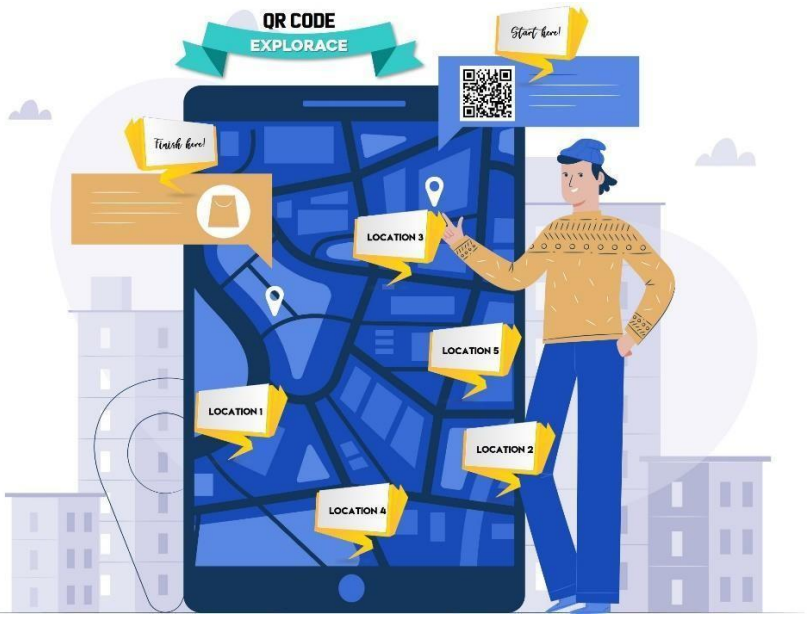


Fig. 1 Tools used in the gamification setting: QR Code concept for Treasure Hunt

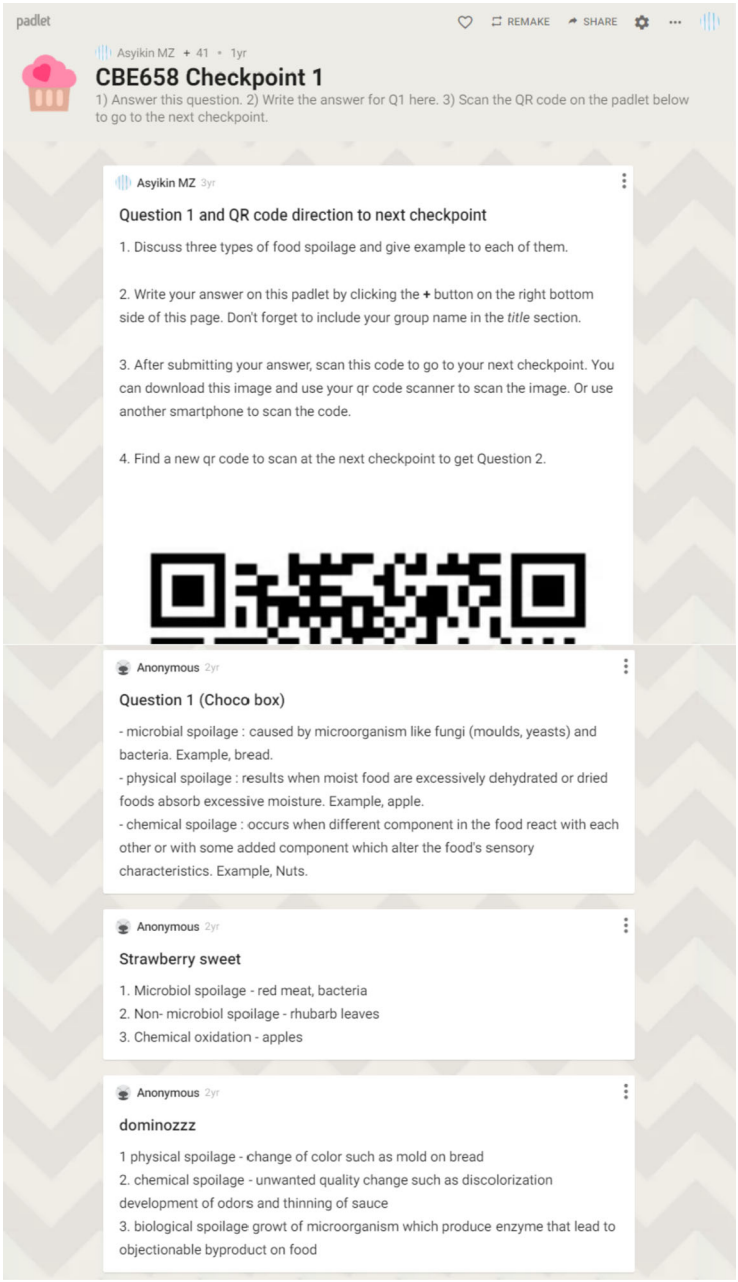


Fig. 2 Tools used in the gamification setting: Padlet for Treasure Hunt

At the end of the course, feedbacks from the students were important to enhance the way of teaching and learning in the future. Google Forms was used to collect feedbacks on the students' preference, interest and motivation in learning.

Results and Discussion

A total of 276 students took part in the questionnaire feedback survey. Fig. 3 shows the type of teaching methods and learning activities mostly preferred by students. It was observed that game-based and gamification approach gained the highest preference at 70.3%. The second highest preference was activity using technology which was not surprising as this mobile-savvy generation engaged with their gadgets most of the time. Clearly, only around 25% were motivated by traditional lecture approach in classroom setting.

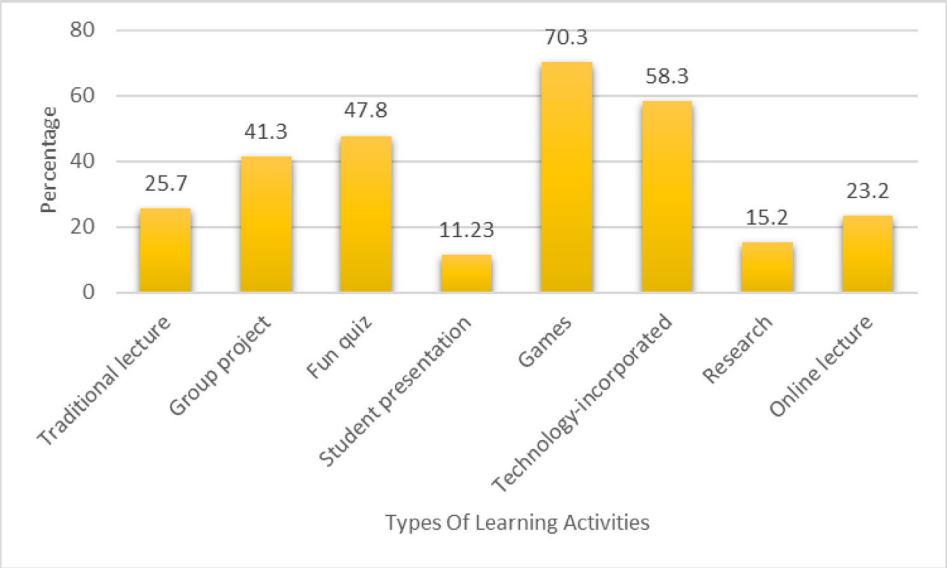


Fig. 3 Students' Preferences on Learning Activities

Conclusion

Game-based and gamification in classroom offer flexibility of learning and make the course more interesting for both students and instructors. Students may need to adapt their learning approach to benefit from the game-based and gamification model. They learn immersively and gain knowledge deeper through gamification. It seems that gamification has more implied expectations compared to conventional teaching approaches, and students need to be prepared for knowledge acquisition, either in the classroom or online platform. It is important that educators are able stimulate students' self-motivation and engagement during the practical of game-based and gamification approach in classroom or online platform. The effects of game-based and gamification should be considered during design phase because some game elements such as points and ranks are rarely used independently (An, 2020). It can be concluded that game-based and gamification-incorporated learning do benefit motivation and performance if designed properly.

Acknowledgement

The authors would like to acknowledge the Faculty of Chemical Engineering for support, and all students of Food Preservation Technology course for continuous cooperation.

References

An, Y. (2020). Designing effective gamified learning experiences. International Journal of Technology in Education (IJTE), 3(2), 62-69.

Annetta, L.A., Minogue, J., Holmes, S.Y., Cheng, M.T. (2009). Investigating the impact of video games on high school students' engagement and learning about genetics. *Computers & Education,* 53(1), 74-85. doi: 10.1016/j.compedu.2008.12.020

Barata, G., Gama, S., Jorge, J., & Gonçalves, D. (2013). Improving participation and learning with gamification. Proceedings of the First International Conference on gameful design, research, and applications, 10-17. doi:10.1145/2583008.2583010

Bouwmeester, R.A.M., de Kleijn, R.A.M., van den Berg, I.E.T., ten Cate, O.T.J., van Rijen, H.V.M., Westerveld, H.E. (2019). Flipping the medical classroom: Effect on workload, interactivity, motivation and retention of knowledge. *Computers & Education*, 139, 118-128. doi: 10.1016/j.compedu.2019.05.002

Deterding, S., Dixon, D., Khaled, R., & Nacke, L. (2011). From game design elements to gamefulness: Defining "gamification". Proceedings of the 15th International Academic MindTrek Conference, 9-15. doi:10.1145/2181037.2181040

De Freitas, S., & Conole Gráinne. (2010). The influence of pervasive and integrative tools on learners' experiences and expectations of study. In R. Sharpe, H. Beetham, & S. De Freitas (Eds.), Rethinking learning for a digital age: How learners are shaping their own experiences. New York: Routledge.

Hanus, M. & Fox, J. (2015). Assessing the effects of gamification in the classroom: A longitudinal study on intrinsic motivation, social comparison, satisfaction, effort, and academic performance. Computers & Education, 80(0), 152-161.

Liu, Y. (2014). Teacher Designed Games: Leading Innovation in Classrooms. In M. Searson & M. Ochoa (Eds.), Proceedings of SITE 2014 - Society for Information Technology & Teacher Education International Conference (pp. 665-669). Jacksonville, Florida, United States: Association for the Advancement of Computing in Education (AACE).

Mekler, E., Brühlmann, F., Opwis, K., & Tuch, A. (2013). Do points, levels and leaderboards harm intrinsic motivation? An empirical analysis of common gamification elements. Proceedings of the First International Conference on gameful design, research, and applications, 66-73. doi:10.1145/2583008.2583017

Papastergiou, M. (2009). Digital game-based learning in high school computer science education: Impact on educational effectiveness and student motivation. *Computers & Education*, 52(1), 1-12.