SHARING HOW FUN BASED LEARNING ENGAGING STUDENT ATTENTION IN VOCATIONAL AND PROFESSIONAL EDUCATION AND TRAINING (VPET)

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Abstract

With the popularisation of 4G development, thousands and thousands of information flows into our life; those draw the attention of the new generation is getting more massive and tuff necessitated than before. unlikely, most teachers find difficult to stop the student to use a mobile phone for chatting, playing games, watching an exciting topic, and collecting information while attending any class. Teachers take more critical roles to cultivate the students what they can achieve the best knowledge and technology as more specific, and as quickly as possible in a limitation of contact hours.

The Game Based Learning has been contended in many education reviews as well as in response to the needs of the times. On the other hands, more smart skills of teaching and learning are inevitable to emerge, as the time require.

With the born of the virtual environment, it comes to the attention that the digital education has gradually swatted the traditional back and white culture. The interactive technology of digital environment induces not just only the youths and the elders ‘ communication. A new era of human beings, they are willing to spend their own time productively rather than reading and writing in which they find no interest.

The Vocational Training Council (VTC) of Hong Kong would like to investigate more pedagogies in innovation and technology for the vocational and professional education and training (VPET) in Hong Kong. The Department of Construction at IVE (Morrison Hill) under VTC has recently induced new skills of course development in conjunction with the strategy and initiatives of Smart City Blueprint in HKSAR.

This paper presents some innovative skills of teaching and learning which are designed to initiate the mode of fun-based learning in respect of the construction practice with the objectives to gain some hands-on experience and industrial environment in VPET.

In conclusion, this paper aims to figure out some methods to organise intensive learning on a fun basis for enhancing the students’ interest of study in either class or elsewhere. This study motivates a way to widen the curriculum of teaching and to learn development’s flexibility and reliability in exploring the development of smart city facilities, such as teacher meeting learner where they are.

Keywords: game, based, learning, fun, virtual environment, vocational, professional, education, training.

Introduction

This study aims to identify how we benefit of online education in the networked classes as suggested by Savage and McGoun (2015) which may assist the teachers to trigger their mythical powers of divergent thinking, spontaneity, novel behaviour and intrinsic motivation to succeed as contended by Sawyer (2007). The objective is to check whether the students had experienced the online education in elsewhere under the programmes in Vocational and Professional Educational Training (VPET) and to follow up the efficiency of flipped class with the fun based learning setup.

Following the above tasks, two modules have been chosen to pilot online pedagogy as a flipped class model. The majority of teaching plan involves gamification device to engage and to motivate the student(s) in concentration at the time of learning in the group or his own elsewhere which was studied and contended by Strawser (2017). The modules of Construction Project Management (CPM) and Building Services (BS) under the program of Higher Diploma in Surveying and Building Studies have been chosen for my study respectively.

Background

Concerning the study last year, our Head of department and Programme leaders aware that the benefits of flipped and blended class activities. The department of construction decided to launch more skills concerning the online teaching and learning in conduction with the environment of flipped or blended learning approaches as identified in the previous findings by Wong and Hui (2017).

For the findings last year, it is no doubt that the accessibility of the internet is not a problem for our students. Moreover, most students can either upload or download information without hold up. In this study, I have prepared some group works and study packs online for the CPM and BS classes.

In the beginning, there are some illustrations of how the resources abstracted from the digital world, then teaching and learning stuff would be discussed. Next is that how the Ed-tech tools are useful for the assistance of the student’s self-study. Finally, there are some shares concerning the successes of the results and
feedback from my students and are better than what I expected before.

Based upon my consideration of the above situation, and the level of modules, some digital elements have been created for the students’ use to analyse their performance afterwards. This pedagogy came from Strawser (2017) who studied and advised that the increase of education technology tools, the different forms of digital media had their potential to set and improve learning outcomes and pedagogical practices.

Fun Based Learning (FBL) Setup

All notes or handouts were available on Moodle. The students were informed to study before their attendance in any lesson. There were fewer lectures than the previous year. Most of the time, group works, and discussions were in the class. Allow students to learn outside the class (i.e. computer room, library or home).

All students were required to search on the internet, learn and share among themselves, study and check the referenced books, notes and handouts. On completion of each session of assigned works, every student had to express their views of work done, even little tiny. An announcement will give to the best group in class.

Besides, some quizzes were uploaded and embedded on Moodle for the students’ self-study outside class. Students could discuss their queries in a specified mobile application (App) named “VTC@HK IM” with me at any time. The quizzes could be scheduled to issue the four hour notice on the App during weekend or holidays, which let them perceive and arrange a time for self-study as a habit.

Setup with You-tube

In respect of YouTube, there are more than 1.9 billion logged-in users, which cover 90 countries and 80 languages being participated over the world nowadays as announced on the official blog of YouTube, (2018). Massive videos upload for various audiences.

YouTube was for a group workshop. For example, some links to video clips have been created and embedded on the Moodle, let the students watch before the class. The topics are relevant to the skills of critical path methods and the preparation of a construction Gantt chart.

The target of this set up is to assist the students to understand the logic of setting up bar chart; the essential features of the Gantt chart and the application of multi-skills on excel (i.e. formula, button command, format, and layouts design). It is surprising that all students were able to complete this task when they were asked to watch the video clip and to submit a program within the specified time (1 hour).

Three students in a group were assigned to carry out this task outside the classroom and the works done were submitted via Moodle. Many discussions and peer-to-peer shares between them throughout the whole process were observed. Students expressed that this arrangement was very impressive, and practical, indeed.

Setup with Moodle

A topic was set on the procurement of materials for a construction project. On completion of this group workshop, the students are expected to understand what the procurement documents are required from the time being to the end.

The search engine of Google was the main course; all students had to use their mobile or note-pad for this project in a limited time and then uploaded to Moodle for their presentation in front of all classmates.

Most students well completed the task. As a result, this enlightened them to recognise the function and format of the document and the logistic of the procurement process. Likely, none of them was playing games or slept in that session.

Setup with Google Map

Another topic set for the plan of site layouts. In the past, a demonstration of the case for site layouts was inadequate, due to the limitation of the two-dimension plan and lack of aerial photos for the individual construction site.

Never think of that a satellite map could be quickly picked up from Google map. Students were instructed to collect a plan for the construction site and to discuss the matters already studied from the handouts. The objective is to enhance their attention and participation in this topic. The responses were quick and keen on them. Each student of different groups had focused on the site they interested in and identified the elements, plants, facilities of their selected location.

After they had uploaded their findings, they provided their explanations of what they found. The results of their collected information were symmetrically and comprehensively in correspondence with the notes of the lecture. Most of them recognised the contents of site layout plans with evidential supports successfully and effortlessly.

Setup with Mentimeter

Speakers often use the Mentimeter as the initial part of their talk. Possibly, this could also be a recap session at the end of class. The reason is that students may respond faster to finish the lesson as soon as possible. This set up helped them to remember what they have learnt.

Setup with Quizlet

Most students were found to have weak vocabulary last academic year. Therefore, some supplementary exercises were created on Quizlet and let students study intervals. Likely, there were many students participated in those scheduled quizzes outside the classroom. This set up may be one of the reasons why these sets of students achieved the rates of higher marks. Some students were enjoyable on the Quizlet exercise. It provides five types of study mode for student choice (i.e. match, spell, learn, and wildcard).
Qualitative Assessment for Two Modules’ Classes

Upon completion of the above activities of fbl, a questionnaire issued for the collection of feedback.

The results of the questionnaire survey summarise as follows:

Question 1, 2 and 3 are for the efficiency of fbl activities: 84% respondents of the students agreed that they were enhanced to recap, and to understand the lecture materials as well as vocabulary.

Question 4 and 5 are for the arrangement of fbl: 84% of them agreed the devices helped them with self-study as well as preparation for the examination.

Question 6 is for the time spent on mobile learning: at least 43% of them chose 50/50 of time spent on studying and personal respectively.

Question 7 is for the experience of various Ed-tech tools: 5% with Formatives, 11% with Kahoot, and 6% with Plickers.

Question 8 and 9 are for the presentation of fbl: 87% of them agreed that the arrangement of fbl was in an exciting way and well-structured outside classroom.

Question 10 is for the creation of fbl: 85% of them confirmed they loved this.

Question 11, 12 and 13 are for the use of mobile phone in class; Average 85% of them confirmed that they preferred the group workshop with online searching which enhanced them to focus on the topics with peer to peer learning as well.

Question 14 is for the behaviour of student in class: 69% of them confirmed that they had used their mobile phone for learning in class.

Question 15 and 16 are for the behaviour of student in group discussion: 87% of them confirmed that they acquired more information online during group discussion as well as peer-to-peer learning.

Question 17 is for the creation of online group-work: 81% of them were happy with this.

Question 18 is an open type for what did they like most about the fbl: they found that it was more flexible, more comprehensive knowledge and more interactive.

Question 19 is for what kind of group discussion they liked? 10%, 28%, 15%, and 48% of the students selected topics, pictures, role plays, and videos respectively.

Question 20 is for their preference between group discussion and regular lecture: Most of them consider the pedagogy of group discussion is more beneficial than the typical class. 5% of them did not care if the arrangement was meaningful.

After the focus group meeting with students, a majority of them said that the fbl activities were used to enhance their interest in self-study, their ability on answering the questions and for them to pre-plan test and examination studies. Initially, they found hard to study the module of construction project management. Indeed, they responded that the arrangement of fbl activities let them more accessible to understand the topics and also enhanced their methodical ability when answering the questions of examination rather than notes dictation before.

Regarding the results of the examination, the examination results (Figure 1 and 2) of two modules between last year and this year shown below. The results indication is quite good. These two figures indicate that the percentage of grade A is higher than last year. It suggests that the application of fbl could help with enhancing the students’ performance.

![Figure 1.](image1)

Results of the Module for Construction Project Management between Academic Year 2016 and 2017

![Figure 2.](image2)
Average Results of the Module for Building Services between Academic Year 2016 and 2017

Discussion

From the above survey, the following analyses are:-
- The student did have the experience with online learning in the other modules in VPET.
- The students confirmed that the fbl activities were helpful for their study outside class and preparation for the examination.
- The students responded that making connections with peers, within the learning context, beyond the classroom. It sounds that these are the critical elements on the development of digital environments.
- The students responded that they enjoyed their self-study involved the scenario of inquiry, and working. It sounds that there is room to make up the online pedagogy similar to the Quizlet device.
- The students prefer to learn in the environment with online communication.
- The students prefer to use the mobile phone as an essential tool for communication and learning.
- The results of the examination indicate that the fbl could help to improve and engage the students’ to pay attention in the session of study with more interest.
- Starkey (2012) studied and confirmed that the students could understand the concept, knowledge building, and knowledge products online in the online learning activities. Allen (2014) suggested that the active classroom could have the features of visual, auditory and kinesthetic modality. It is no wonder that the digital technologies and infrastructure supports are getting more comprehensive and prosperous than before. The limitations of online learning activity become busier than before, more stakeholders to join and more choices to create.
- In fact, the current surveys indicate that there are 18,394,767 numbers of the mobile subscriber and approximate 7,409,800 population recorded by Office of the Telecommunications Authority (OFTA, 2018) and Hong Kong Census and Statistics Department (HKCSD, 2017) respectively in Hong Kong Special Administrative Region.

Conclusion and Recommendation

Given the above, I believe that the mobile phones do multi-function wide these days. It replaces the recorder, drawing boards, typing machine, camera, and television. John, Traxler & Agnes Kukulska-Hulme (2016) have studied the impact of mobile phones. The change is not just only on the student and also the public behaviour. It proves that the adjustment of pedagogy to have been the connection with all kinds and levels of education as well as in VPET.
- The smart learning environment studied by Liu, Wosinski and Huang (2017), there are some essential elements categorised, such as the learning resources, creative tools, teaching community, and learning community. In facts, the students could have learnt from their experience either directly or indirectly, either by the group or by themselves. The creation of such environments is going to be a new mechanism to track in VPET.
- In the future, VPET could allocate more investigations for the development of learning outside the classroom in connection with the mode of human changes vastly and quickly nowadays.
- Moreover, VPET could add this kind of fun based learning activities as the supplementary exercises for self-study by the students. Perhaps, the development of badge, avatars, and system would be a possible way to run as an incentive scheme bit by bit together with the scholarship awards gradually.
- In consideration, it implies that gamify our class with the digital network is feasibly applied nowadays, next is to design a way of engaging the student intrinsically.
- In fact, some famous companies are promoting the badges mechanics in their projects for the market attraction of more stakeholders in the long-term task which was revealed by Farber (2015). There may have some kinds of scholarship tied up.
- I want to quote a famous epigram by Heywood (1546) who wrote that “Rome was not built in one day”, therefore the online education should be developed step by step.
- Once the artificial intelligent techniques are running maturer with the solid backup of the Nano-based computer system as the appearance which studied and measured by Picciano (2017) and the obstacles (i.e. Legal issues and privacy rights, infrastructures establishment in super-cloud and cost of initial setup) could be resolved as studied by Das (2015).
- I believe that the fun class-based learning will be an essential element in the ways of pedagogy in future. A new era of digital education becomes true; any examination could also be carried out on the internet with certification upon receipt of the matureress of biometrics technology.

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Reference:


Louise, Starkey. (2012). *Teaching and Learning in the Digital Age; Chapter 4 Connections and relationships*. London: Routledge. (pp. 29-40)


