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Engaging Vocational College Students through Blended Learning: Improving Class Attendance and Participation

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Abstract

Perfection is difficult to achieve if one is teaching knowledge skills to the students in Vocational College for their time courses using the conventional learning methods currently practiced. Blended learning combines two methods for e-learning and also face-to-face inside or outside the classroom. Previously, the students had undertaken a traditional face-to-face classroom delivery for a module on teaching and learning. Attendance for the lectures was poor and interaction between the lecturer and students was limited. Using the collaboration concept of the “sharing is caring” which is the potential a student can achieve given the guidance of a teacher and the collaboration of others, the module focused the learning sessions on scenarios where students worked in groups to achieve an answer to the problems within the scenarios. The core of the module is an e-learning package on mentorship in vocational learning which is named “Voc-Learning”. Built around this are a series of face-to-face group work sessions, short lectures, web application and an online reflective discussion using Web 2.0 technologies. Some of the applications that were utilized in Web 2.0 have been explored but not much research has been done in the vocational field.

Keywords: blended learning; web2.0; vocational;

1. Introduction

The rising of student attendance and absence prevention have always been parts of concern for teachers as well as society members and parents (Abdul Rahim & Chia, 2014). Students who are not in school cannot learn and frequently drop out. Attendance problems and truancy are usually signs to dropping out of school. Students with

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attendance problems are likely to develop negative social behaviours and personal practices not acceptable in the skill world (Zaliza, Mohd Safarin & Ridzwan, 2014).

Vocational Education is a practice-oriented approach to education and emphasises on what to do in the workplace as a result of either learning to meet the requirements of the career or improving student performance on the skill level to be possessed. Students must follow the lessons and skill test based on the standards set by a field of work.

The role of the Technical and Vocational Education (TVE) should be considered as a medium that can be combined with elements of e-learning in educational technology and give a better impression on the students, vocational college (VC) and also in terms of careers (Muhamad Azhar, Mohamad & Amri, 2013). The phenomenon at work today is different from the past. It is characterized by global competition, cultural diversity, new technology and new management processes that require employees to have problem solving and critical communication skills and high level of workmanship according to the study done by Jamaliah, Rohana and Aede Hatib (2012).

This study aims to investigate the use of e-learning using Web 2.0 technology based applications in terms of the improving class attendance and participation among vocational students and teachers in VC under the management of the Ministry of Education (MOE). The training program for vocational students has been greatly changed by the passage of time in the curriculum and teaching methods in the classroom (Ahmad, Syed, Mohd & Mohammad, 2012). Career excellence vocational education will be achieved through work-based learning oriented training programs by allowing the content knowledge and skills available to students and constantly being adjusted to conform to the new requirements in the industry, business and society (Hyland, 2007; Kementerian Pelajaran Malaysia, 2011).

The current student generation has been exposed to the technology of the Internet and smart phones since early teenage years as stated by V. Gialamas, K. Nikolopoulou, and G. Koutromanos, (2013) who hold that most of the students have experience using the Internet before they enter the educational institution (Gialamas et al., 2013). A study by Sandars dan Murray (2009) showed that students prefer to use technologies that they are familiar with such as mobile network, social media and blogs to interact and get information. Valtonen and friends (2012) suggested if teachers have their own environment to negotiate the learning needs of students and how it is supposed to connect with students and what form should the communication between students and the learning environment that teachers need to take, then teachers need to make full use of existing facilities. The study by Crie (2006) emphasised that blogs are highly motivating to students, excellent opportunities for students to read and write, effective forums for collaboration and discussion and powerful tools to enable the learning or mentoring to occur. In the past five years of social media, many applications such as Facebook, Twitter, YouTube, Google+ and Wikipedia have come to dominate the ways in which digital technology is now used around the world (eBizMBA, 2014; Ellis & Cohen, 2009).

One of the strongest effects of the technology in that study was its ability to promote class discussion among students. This method, which is more effective communicative learning should be sought and practiced in VC so it could be more relevant to improve class attendance and the needs of the students and teachers at present (Muhamad Azhar et al., 2013). The study conducted by Mohamad Amin Embi, (2013) listed 40 types of Web 2.0 applications suitable for the use in the teaching and learning (T&L). This application can help teachers and students to face the changing patterns of learning in the new millennium. E-learning strategies are still not being explored extensively in the system of vocational education for the learning process.

2. Problem statement

Vocational courses indicate that students enjoy the class a great deal, yet attendance is low. It is a problem familiar to many vocational teachers. Moreover, when students were in attendance many were inattentive, either dozing off or otherwise occupied for at least part of the class period. The methods of using information technology in vocational education have sought to prevent students from being left behind in their learning. The findings by Azhar, (2011) was in line with the study by Hamdan dan Nor Hidayah (2008), which found that teachers felt that students with focus and effort are weak in terms of school attendance. From this point the researchers see a better way of learning that can be applied to solve problems that occur in VC.

To address the problem, the MOE has provided Vocational Transformation Plan to strengthen the training for skilled students. The implementation process of education transformation requires new approaches and strategies so
that the students are able to own and master the skills needed in the 21st century (Ahmad et al., 2012). Therefore, this study is an ideal platform to be exposed to vocational students in VC in teaching and learning new uses Voc-Learning applications based on blended learning model.

3. Advantages of blended learning

The research for this article is based on the model that has been proven as blended learning. Utku Köse (2010) did a research on blended learning model supported by popular Web 2.0 technologies and used it in a Mathematics course at a high school in Afyonkarahisar (Köse, 2010). The students’ academic achievements improved with blended learning and this activity was mostly good for the students. Fig. 2 shows the model of blended learning, which is the combination two types of learning, face to face learning and e-learning. In this paper, e-learning can be a social media platform and face to face will as a classroom or workshop.

Ginnie and Ellis (2007) studied the relationship between online and face-to-face teaching and learning. The study consisted of 127 veterinarian science students. The students were in year three and four of a five year degree program. Of the 127 students, 66 were in their fourth year and 61 were in their third year. They found that student learning outcomes were better when there is student interaction, a favourable workload, a quality of online teaching and resources. They also found that student outcomes are more favourable when instructors clarify the value of student posting and interactions as well as seek to understand their students’ perceptions in the online part of a blended learning course (Ginne & Ellis, 2007). For a blended learning course to be successful, the students must be motivated to engage in online activities as well as be made to understand that they are acknowledged and heard (Feiz, Hooman, & Kooshki, 2013; Shivetts, 2011).

Blended learning is a new way of education that depends on the use of information technology in the form of online active learning strategies that improve teaching and learning strategy based. In general, blended learning has several features of face to face learning and e-learning which makes it a new approach for creating educational programs that can take into account the individual differences between students and bring different learning methods. Studies carried out by Kazu and Demirkol (2014) found students who have gone through the learning process in a suitable environment according to blended learning were more successful after the study compared to the learning techniques practiced earlier. Looking at this situation, it can be said that learning adapted to the environmental conditions and technology has become more effective than traditional learning throughout the research process as shown in Table 1.

|                         | Traditional | Blended learning |
|-------------------------|-------------|------------------|
| Classroom               | face to face| face to face      |
| Practical               | face to face| face to face      |
| Assignments             | Individual  | Individual       |
|                         | group       | group            |
| Workshop                | College     | College          |
|                         |             | Online           |
| Learning Materials      | Teacher     | Teacher          |
|                         |             | group of teacher |
| Online support          | none        | conversations    |
|                         |             | talks            |
|                         |             | Submitting       |
|                         |             | assignments      |
|                         |             | online           |
|                         |             | Decision         |
|                         |             | assignments      |

The issue of costs should be taken into account for each particular technology when integrating information technology into teaching and learning (Sife, Lwoga, & Sanga, 2007). Blended learning has the potential to revolutionize the educational system of quality and cost. Redesigning the basic model of vocational education needs to be done. VC productive learning systems provide more opportunities for teachers to deepen their skills more efficiently. VC can leverage information technology to create a student-teacher ratio in VC balanced. Using blended
learning model gives teachers more time to focus on learning activities that engage students and improve their own skills (Hamilton & Tee, 2013).

A study by Mckenzie, Perini, Rohlf, Toukhatsi, Conduit and Sanson, (2013) showed a reduction in time-to-face classes which gave impact on the organization to improve time efficiency of the learning session. Perceptions of students from the class will be presented by an open comment on the web learning. Teachers and students can enhance the experience in the classroom in person to address the inconsistency between teachers and teachers' approaches to the different learning content and synchronize content between class sessions and online learning (Mckenzie et al., 2013).

Fig. 1 shows one example of online learning sessions that made used of the Facebook application. The learning sessions can occur anywhere and at any time depending on the students’ interest to promote students’ engagement with school, reduce dropout behaviour and increase school completion as evidenced from only 12 comments out of 44 students. Although there were not many comments, it remained to be seen by the students’ access to Facebook. The attraction comment from classmates also provides the impetus for other fellow students to voluntarily follow the development of learning through Facebook.

4. Proposed blended learning model for vocational college

The rotation models by Heather Staker and Horn, M., (2012) reviewed the choice based on several factors that exist in the learning system and suitable to be used for vocational courses in Malaysia (ref. Fig. 2) (Staker, Heather & Horn, 2012). In general, learning is a process of acquisition of knowledge, skills and behaviours and attitudes and
beliefs on students. According to Woolfolk (1995), learning is a process in which experience causes changes in knowledge while behaviour remain. Learning is a lifelong process and it happens regardless of place and time.

![Rotation model for vocational college.](image)

4.1. **Vocational assessment**

The theory of a comprehensive assessment in this study is based on the taxonomy of Bloom and Krathwohl (1956) for the cognitive domain, taxonomy Dave (1970) for the psychomotor and taxonomy Krathwohl (1964) for the affective domain (Krathwohl et al., 1964). Exams mostly executed in education are shaped for achievement (Abu Bakar & Bhasah, 2008). Assessment is based on observation and trial that are against something or production process of the outcome rather than the implementation of some tasks (Purvis, Aspden, Bannister & Helm, 2011). Assessment includes methods that are very extensive in testing and requires students to demonstrate the efficiency or knowledge to provide proper report and produce something good tactfully. Teachers need to make a judgment on the knowledge, skills and characteristics of cognitive, psychomotor and affective students. The role of students also gives reprisals against edict or skills while proficiency can use ordinance or the highest ranking.

4.2. **Constructivist learning**

Constructivist learning theory or belief structure is a theory built on the assumption that knowledge is constructed by students as a result of the learning experiences through which he had (Driscoll, 2005). Constructivist learning theory is a theory of learning that is very dominant in the education system. Students interpret new knowledge with the help of existing knowledge. The understanding of constructivist theory explains that students are not like empty containers waiting to be filled with learning materials. However, students are active individuals who are always looking for the meaning of what he experienced (Alessi & Trollip, 2001; Driscoll, 2005). Therefore, the constructivist view of knowledge cannot be transferred, but the students are linked with the process of building knowledge based on what he experienced. In the study by Mayer (2009), constructivist learning happened in the
learning environment technology when students are involved in cognitive processes that encompasses a selection of images and sound, sorting images and sound to visual and verbal model with their existing knowledge.

4.3. Online collaboration

Online collaboration is a matter of the hot topics in the world of education today. Collaborative learning has a lot of terms today with the new technologies in education (Kwon, Hong, & Laffey, 2013). According to Gözde Girgin, (2011) who conducted a collaborative activity in the classroom using Web 2.0, the students have created their own websites that not only provide an opportunity for students to express themselves, but also help them to move forward in the process of self-confidence. Students will not only become the creator of the website, but they also will have a role in providing meaningful feedback with how to assess and respond to their peers. Therefore, the students will be in the process of T&L roundabout (Theng, Mai, & Choon, 2014). They should be involved in the task and pay attention to what other people are doing at the same time. As mentioned by Munkhchimeg and Sanjaasuren, (2013) through a study that revealed that learning management systems can be made more efficient if it is enhanced by more recent collaborative learning tools.

4.4. Self-learning

Self-learning is a distinctive alternative approach that takes into account the aspects of individual differences, interests and abilities of students in the learning process (Heong, Jailani, Razali, Mimi Mohaffyza, Mohamad Widad, & Kiong, 2013). Learning styles do not only highlight elements of cognitive processing style and think man, but also involves how perceptions do and organize information (Anizah, Norlida, & Za’faran, 2012). At present, many researchers are studying the unique characteristics of an individual's learning in order to generate an alternative to repair practices to further enhance learning and academic achievement. Many students are aware of the learning styles that are appropriate to be applied in the learning process. If learning styles are practiced directly it will help the students to strategize effectively in their learning process (Cornelius & Gordon, 2013).

5. Voc-learning application

Voc-Learning has integrated constructivism theory and evaluation theory into the content of development and learning material to produce a material that meets the requirements of vocational students. Design and development of an application is a very important element in creating effective learning materials. All effective learning materials will be produced if the fundamental of learning theory is taken into account during the design of these materials.

Web 2.0 has gradually become a must-have necessity in teaching and learning due to its ability in sharing, interaction and collaboration among students in their daily lives. With the right content, this technology can be a suitable choice for enhancing the skills and a motivation tool for improving class attendance and participation vocational students. Fig. 3 shows the interface of Voc-Learning applications and developing using Web 2.0 technologies. Social media refers to the means of interfaces among people in which they create, share and exchange information and ideas in a virtual environment and networks (Danciu & Grosseck, 2011). Social media is “a category of online media where people are talking, participating, sharing, networking and bookmarking online” (Jones, 2012). Social media has become one of the most popular online activities between students and teachers. Social software, including email, threaded discussion forums, blogs, wikis, collaborative bookmarking, and text chat are common examples of social computing technologies that have been used to enhance learning environments (Ellis & Cohen, 2009). A study by Crie (2006) emphasised that blogs are highly motivating to students, excellent opportunities for students to read and write, effective forums for collaboration and discussion and powerful tools to enable the learning or mentoring to occur (Crie, 2006). In the past five years of social media, many applications such as Facebook, Twitter, YouTube and Wikipedia, have come to dominate the ways in which digital technology is now used around the world (Ellis & Cohen, 2009). Social media constitute an increasingly important context where individuals utilize them regularly in their everyday lives. Therefore, this poses a potential benefit in assessments, curriculum, and teaching practices in the vocational school today.
6. Discussion

This paper has described about learning in different ways of old classroom to improve class attendance and participation. When teenagers play online multiplayer games, or when they share and remix web content, they collaborate to reach a common objective. The technology of Web 2.0 or social media is fundamentally interactive and collaborative. As a result, Web 2.0 can foster team-work skills. Moreover, collaborative skills are essential for living in the digital world and to deal with the ever-complex problems faced by students. Vocational college should prepare the students for collaborative team-work and there are many ways to do so.

7. Conclusion and future work

The study of e-learning typically focuses on the factors of achievement, attitude, knowledge base, socio-economic status and so on. This study is important to be implemented because these factors are significantly associated with the achievement of vocational students in a particular field of study skills to be acceptable as the practice of their craft. This study also provides a new innovation in teaching and learning process that involves the transfer of knowledge from teacher to student and it is not only theoretical but also the practical form of training or hands-on based. The information presented can be used as a guide and reference in improving the quality of education, especially in the vocational education. The usefulness of web 2.0 technology and blended learning model will study also, for example the usefulness and the good practice of using web application, Facebook and Twitter. These findings will influence how educators, students and their parents will engage in a participatory process of learning and teaching. As a result, this change will map the future direction of learning in the vocational college.
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