

# Taylor's University Lakeside Campus: Application and Effectiveness of e-Learning Tools for Students' Learning Activities

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**Abstract** Electronic learning has emerged as one of the most popular pedagogical concepts early in the year 2000. Many studies and researches have been conducted and the lack of technology availability causes its effectiveness in teaching and learning. However, the recent new technology and innovation tools can be fully utilised to fill up this gap. Blended learning which adopts a strategic and systematic implementation of technology combined the best features of face-to-face interaction to integrate different mode of delivery, teaching models, learning styles within teaching and learning environment. This paper will discuss on how to apply e-learning tools for students' learning activities and assessment. Examples of Socrative and Padlet conduction will be presented. Then, we present effectiveness testing methodology on these e-learning tools. Furthermore, we did a result analysis of e-learning tools' effectiveness and discuss how these e-learning tools help to conduct learning activities and assessment in our blended learning system.

**Keywords** e-Learning tools • Blended learning • Assessment

## 1 Introduction

Electronic learning (e-learning) has significantly enriched students' learning and experience and allowed much flexibility to ubiquitous learning. However, a great fear among educators or instructors is that this human interaction in online environment leads to more alienation between students and teachers and less meaningful communication among students and teachers (Ko and Rossen 2010). E-mail, discussion forum, online chatting, video conferencing and other tools are e-tivities that are always utilised by students and teacher to communicate to each other for

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learning purposes. E-tivities enable enjoyable, cheaper and productive online learning for students (Salmon 2013). They are designed by instructor and able to engage students to participate actively and thus promote active learning or collaborative learning among students.

In Taylor's University Lakeside Campus, we had implemented e-learning system, named Taylor's Integrated Moodle e-Learning System, to manage all online learning class, learning management system (LMS), online assessment, online learning activities and many online tasks for virtual learning environment. Due to less meaningful communication problem if we teach entirely online, there is a need for strategic plan for full-scale implementation of blended learning, which means combined e-learning and face-to-face learning together. This mode is also not widely adopted in many higher education institutions (Cheung et al. 2010).

Besides less meaningful communication, many educators also worried about online assessment tools that are used in e-learning system. Without face-to-face meeting, the instructor is just being there sporadically, at the times when they log on, whereas the students may post their comments at any time of the day. Indeed, online learning depends heavily on the engagement and participation of students. If they failed to involve our design learning activities, it is meaningless to teach online. As an instructor, we need to step back a bit to reflect what we did is suitable, and we should design or fully utilize the online assessment tools to improve our teaching and promote efficient student learning in the future.

Assessment is a process of collecting and interpreting information or evidence of learning. We should know how important are set learning outcomes and plan our assessment for our teaching in the school. Constructive alignment is crucial, which will match with students' learning level. Therefore, we need to design a good content for students to achieve the learning outcomes. At the same time, we need to design a plan for assessing students' achievement of learning outcomes and support students' learning. There are few e-learning tools that have been used in our school to engage students especially for student assessment, which are Today'sMeet, Padlet and Socrative. In this paper, we will do some reviews on how we design and conduct online learning activities and assessment via these tools. Next, we present effectiveness testing method and result analysis on the effectiveness of these e-learning tools. Finally, we discuss some impacts of the testing results in our blended learning system.

## 2 Application of e-Learning Tools for Students' Assessment

What types of learning activities are most effective for online learning or blended learning? In this section, we review some guidelines to design suitable activities and suite for students' assessment. Online learning represents a considerable opportunity for universities to promote larger and more democratic access to intellectual resources, reducing the social gap which is often related to on-site learning (Ravanelli and Serina 2014). Several studies that demonstrate the perception of students provide valuable insights into the aspects of teacher practices which may in

turn affect student behaviour (van Beek et al. 2014). We also present some concrete examples of e-learning tools for students' learning activity and assessment that we found to be effective, and we show how we apply, organise and later evaluate their effectiveness.

Generally, it is a must for the teacher to play a role in dividing students into groups because grouping students may be difficult, confusing and irritating for students when they simply form groups and left their own devices behind. In blended learning, students have mostly known each other from face-to-face session and get opportunity to form groups. The size of the groups should not be too large and may vary based on the tasks. Total members for discussion purposes can be ten and above; however, four to five members are the optimum size for group assignments (Ko and Rossen 2010).

Next, instructor or teacher may not participate in group activities, but their guidance and supervision will encourage students' participation, and the need to ensure individual's contributions to the group is recognised. Some instructors may ask group members to evaluate each member of the group, by using a well-defined set of criteria and rubrics of assessment (Ko and Rossen 2010). This extra input can assist the instructor to discern what each student has contributed to the group efforts.

As mentioned in the Introduction, we had applied two e-learning tools for students' assessment and learning activities, Padlet and Socrative. Padlet is a tool that enables the teacher to use drag and drop method to create assessment questions to the students and view students' answers on the wall constantly. This free tool enables teacher to post assessment questions on the creative wall, with fun backgrounds and colourful and gorgeous interface, and students can answer and post it on the wall immediately. Figure 1 has shown a snapshot of Padlet interface where teachers are conducting assessment to their students. Besides assessment tools, Padlet also can be used for learning activities in the classroom. Students and teacher can post image, photo or video link to each other for learning activities.

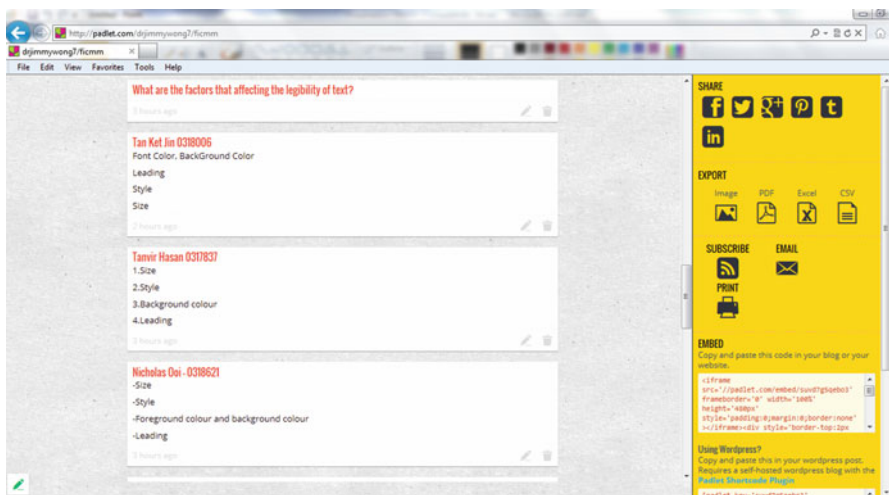


Fig. 1 Snapshot of Padlet interface for conducting students' assessment

Besides that, Socrative is another free tool that engages students and enables teacher to assess students with educational activities on tablets, laptops and smartphones. Instant result aggregation and visualisation via the use of real-time questioning in Socrative help teacher’s online learning or blended learning become enjoyable and collaborative. Figure 2 has illustrated an example of students’ answer in Socrative, and students’ progression can be kept track as shown in Fig. 3. Same as Padlet, Socrative also can be utilised to conduct learning activities in face-to-face learning session.

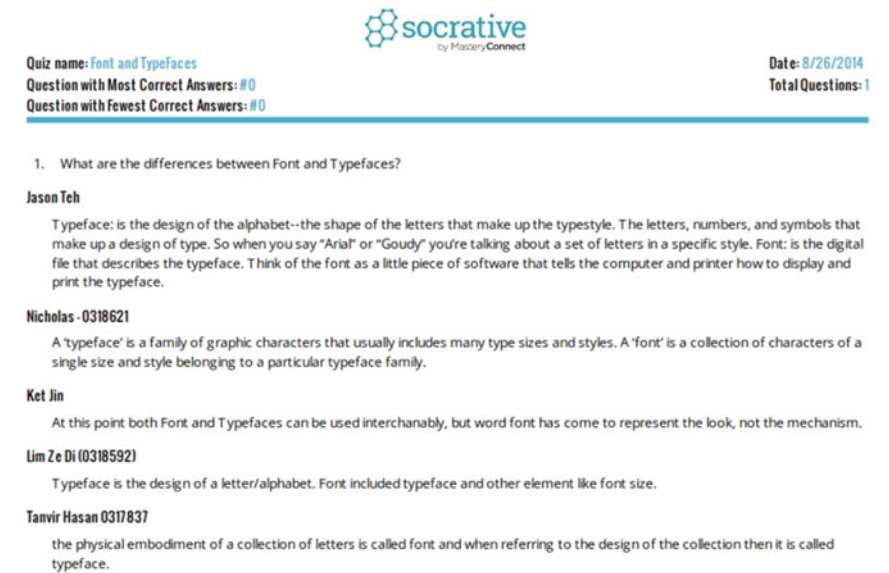


Fig. 2 Example of students’ answer for students’ assessment in Socrative

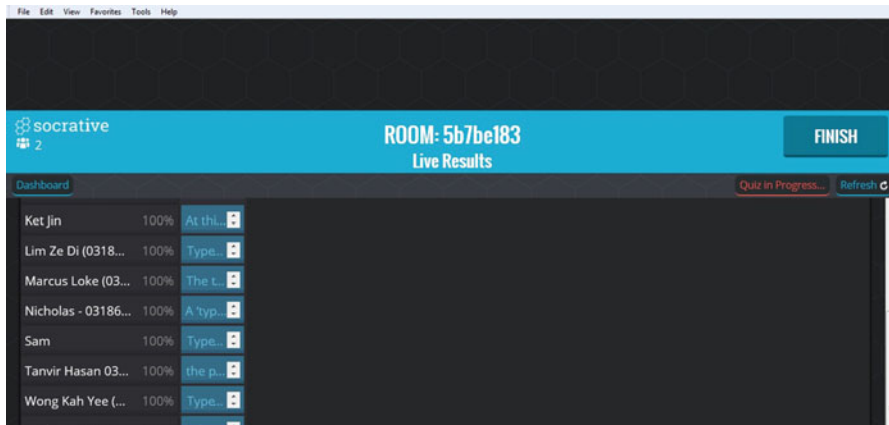


Fig. 3 Snapshot of students’ progression in Socrative

Discussion forum in TiMES can be used for learning activities and students' assessment in online learning. This tool seems like a traditional tool, but it still can be used online, and it is a less creative, more formal and text-based activity.

### 3 Effectiveness of Testing Method

To evaluate the effectiveness of e-learning tools as assessment tools, the researcher had carried out interview with the students to gather qualitative information on this. Nineteen students from the School of Computing and Information Technology, Taylor's University Lakeside Campus, are respondents for this effectiveness testing. Besides interview to gather more information, the researcher also asked the testing questions via Socrative. Two questions have been asked to students:


- (a) By comparing the Padlet and Socrative, which one is your preferred tool in our class assessment? Why?
- (b) In your point of view, what is the best tool for conducting the online learning activities? Socrative? Padlet? Forum? Others? Why?

Students' answers are collected via Socrative and will be shown in the next session, Results of Effectiveness Testing on Students' Assessment Tools. After answering the questions, the researcher had one-to-one interview session to obtain further information on the effectiveness of the e-learning tools that had been used in online learning or blended learning.

### 4 Results of Effectiveness Testing on Students' Assessment Tools

The effectiveness testing shows that 17 students preferred the use of Socrative as assessment tools, that is, 89.5 % of the respondents like to use Socrative for assessment and quizzes. The reason given by them is mostly because of privacy—other students cannot view each other's answers in Socrative. Padlet can let each other view answers on the wall. They also stated that Socrative looks formal than Padlet for the interface and can be used for different types of assessment questions, such as multiple-choice questions (MCQ), true or false questions and short-answer questions. This assessment tool can be carried out in real time and flexible to use; it is simple and saves time. Figure 4 has shown some example results given by the respondents via Socrative.

However, Padlet is the most popular and preferable tool for e-learning activities. Nineteen respondents give the same answers and preferred to use Padlet for conducting e-learning activities. They choose this because of its high interactivity and funny and colourful background at the activity wall. They are able to post their



Quiz name: **Qualitative Question for DIT April 2013 Intake**  
 Question with Most Correct Answers: **#0**  
 Question with Fewest Correct Answers: **#0**

Date: **8/27/2014**  
 Total Questions: **1**

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1. By comparing Socrative & Padlet, which one is your preferred? Why?

**Ng Jia Shin**  
 I prefer Socrative because of the cool user interface. Socrative offers different type of question like multiple question, true or false and short answer.

**Prasong Punyawan**  
 I prefer to use Socrative because Socrative can make questions like true/false, MCQ and etc. Socrative allows the user to protects its answer unlike Padlet where the answer is exposed when the user starts to type.

**goh jia jieh**  
 i prefer socrative because is looks formal than the padlet

**Sim Zhao Nna**  
 Padlet because it is more fun

**Yang John Ho**  
 I Would preferred SoCraTive. as padlet may caused some of us to change our answer since we can see other people answer. Socrative would be better

**Wong Tin Woei**  
 I prefer socrative as the answer will not be shown publicly to other people while everyone's answer is shown publicly in padlet.

**Fig. 4** Some examples of qualitative results for question 1 via Socrative

answers in real time and can view others instantly. They feel faster while they are using Padlet to answer questions and the answers are editable. One of its disadvantages is that students can register any name to log on and carry out the learning activities, low security and privacy.

Students also commented for forum tool which is used in e-Learning system, besides Socrative and Padlet. They rather not using forum as this tool is not user-friendly, out-dated design, not organised, text-based activity without any animation or multimedia elements, bored and static interface design. The researcher had an experience with the students feeling bored when they attended lecture and tutorial session. When they feel bored, they were not following what the teacher taught and discussed in the classroom. They totally did not pay attention and cannot concentrate on the teaching and learning process. They cannot learn well although revision and discussion are continuously conducted in every teaching and learning session.

Hence, “engaging” and “active learning” are two important features to solve these problems in classroom activities. We need to engage students to participate actively in teaching and learning classroom. When they are active and enjoy the learning activities that had been offered to them, they will learn something. Instant

feedback, real-time questioning, instant and visualised discussion will help the teacher to engage students in the teaching and learning process, especially for those lectures are more to facts than practicals. These learning tools let us organise, share and develop our ideas and brainstorming faster, easier and more fun! That is why we strongly agree that these e-learning tools can help teachers increase students' engagement in face-to-face session and promote active learning in classroom. Active participation in an enjoyable learning session is really helpful to increase and enhance students' learning.

Moreover, these e-learning tools also provide focus and chance for interaction and increase motivation, and students understand more complex concepts through visual presentations. These advantages can lead to deeper learning and promote metacognitions. When the students are given real-time questioning (from lower learning level until higher learning level), students need to think first before answering the questions and indirectly promote their higher thinking level. Some questions need students to do deeper thinking until they obtain the correct answers. From here, we can conceptualise learning as collaboratively co-creating knowledge, via cooperative, peer-to-peer, informal learning and interaction by utilising these e-learning tools. The teacher actually plays a key role in dialogue and interaction between students. With these tools, immediate reporting and respond or feedback system, students and teacher will gain all these benefits.

## 5 Conclusion

Blended learning should be adopted in Taylor's University to enhance the quality of student learning experience, enrich students' learning experience, facilitate leading practices and innovative approach to teaching and learning and provide flexibility of provision to support a diverse student population. Blended learning should be explored in higher education with scheduling and support. The lectures have been taught in X-space, the future smart classroom in Taylor's University. This classroom is purposely designed for flexible formal learning to facilitate a diverse learning experience in a highly collaborative and engaging manner. This will promote collaborative learning in classroom. The designed spaces are most suitable and comfortable for them to have discussion and online searching to answer tutorial questions. With the advantages of X-space, these learning tools, such as Socrative and Padlet, provide us opportunities to do collaborative learning because they let us do instant discussion, real-time questioning and instant results, instant feedback and personalised learning and produce report about students' progress.

## References

- Cheung, K. S., Lam, J., Lau, N., & Shim, C. (2010). Instructional design practices for blended learning. *International Conference on Computational Intelligence and Software Engineering (CiSE)*, 1–4
- Ko, S., & Rossen, S. (2010). *Teaching online: A practical guide* (3rd ed.). New York: Routledge.
- Ravanelli, F., & Serina, I. (2014). Didactic and pedagogical view of e-learning activities free university of Bozen-Bolzano. *Procedia – Social and Behaviour Sciences*, 116, 1774–1784.
- Salmon, G. (2013). *E-tivities: The key to active online learning*. London: Routledge.
- van Beek, J. A., de Jong, F. P. C. M., Wubbels, Th., & Minnaert, A. E. M. G. (2014). Measuring teacher regulating activities concerning student learning in secondary education classroom: Reliability and validity of student perceptions. *Studies in Educational Evaluation*, Article in Press