TWITTER FOR LEARNING IN BLENDED LEARNING COURSES

Sharon Pearl Henry Serub1, Adeline Engkamat2, Ketty Chachil3, Ling Siew Ching4, Ling Siew Eng5 & Margaret Chan Kit Yok6

1Faculty of Administrative Science & Policy Studies, Universiti Teknologi MARA (UiTM), Sarawak Branch, 94300 Kota Samarahan, Sarawak, Malaysia
   email: sharonpearlhenry@gmail.com
2,3,4,5Faculty of Computer and Mathematical Sciences, Universiti Teknologi MARA (UiTM), Sarawak Branch, 94300 Kota Samarahan, Sarawak, Malaysia
   email: adeline@uitm.edu.my, ketty@uitm.edu.my, lingsc@uitm.edu.my, lingse@uitm.edu.my
6Faculty of Plantation and Agrotechnology, Universiti Teknologi MARA (UiTM), Sarawak Branch, 93400 Kota Samarahan
   email: drmchan@uitm.edu.my

ABSTRACT

With the introduction of the internet and the World Wide Web, the process of globalization has gained traction rapidly. Supporting this process are the three engines of globalization namely technic, economics and politics. Now in the era of Industrial Revolutions 4.0 (IR4), humans are more mobile, fully utilizing the technology brought about by IR4, especially cloud computing, big data and the internet of things. All of these have changed the way we live our lives. For the institutions of higher learning, they must be able to adapt to these new technologies to ensure they can produce graduates who can fit into the fast-moving globalizing world. One of the ways is to make teaching and learning mobile by using existing social media as one of the platforms to enable students to learn wherever and whenever they want. This paper studies the students’ perception on the use of Twitter for learning in blended learning courses. The study is based on quantitative method, using an online questionnaire as the main instrument to gather the students’ responses. The study found that the students have a positive perception on the use of Twitter as part of the learning process in blended learning courses.

Keywords: Twitter; Blended Learning; Students’ Perception

INTRODUCTION AND BACKGROUND TO THE STUDY

The introduction of the internet in the 1990s, coupled with a free World Wide Web (WWW) heralded a new dawn for mankind which saw the globalizing process rapidly gaining traction and resulting in a world that literally has shrunk, becoming connected in every way imaginable. Supporting this globalization process is the three engines of growth namely i) technic that includes technological change and social organization; ii) economics that includes markets...
and capitalism, and iii) politics with elements such as power, interests and institutions [1]. All three of these engines of growth work together to push communities towards an era where man and machine are working together as one to achieve individual’s goal in everyday life.

With the emergence of Industrial Revolution 4.0 (IR4.0), people are no longer attached to desktops and cumbersome devices. They have become more mobile, fully utilizing the new technologies under IR4.0 such as cloud computing, big data, and the internet of things. This created a need for the institution of higher learnings as they are the ones who provide graduates with the required skills and knowledge to fit into an ever evolving job market. They must be able to adapt to these new technologies to ensure they can produce graduates that can also fit into the fast-moving globalizing world.

Not only that, the new generation of graduates are the so called ‘millenials’ who have different approach towards learning and careers. Their goals and the way they live their lives are also different from previous generation; prioritizing experience over physical assets. They are comfortable in adopting and adapting new technologies in the day-to-day activities, be it learning, working, or recreation. Thus, institution of higher learnings or universities need to change the way they teach this new generation.

**Problem Statement**

There have always been those who support and those who oppose the use of social media, especially among the younger generations. Some applications have come with parental control to allow parents to keep check on the duration of time their children spend on social media. Social media founders have been known to keep electronic gadgets out of their home as they are worried their children will be addicted to it. For example, the WAM Emirates News Agency reported that 69.7% of students in the UAE use social media for five hours or more every day. This raised concern of the impact of social media on the youth in the region [2]. There are serious concern with students neglecting their studies by spending too much time on social networking websites rather than studying or interacting with people in person [3]. However, there are others who believed that social media can be utilized to enrich the learning experience for students as it fits into the learning style of the milleninials who are always ‘on-the-go’ [4, 5, 6, 7].

As social media are more readily accessible compared to learning management platform such as i-Learn provided by Universiti Teknologi MARA (UiTM), using social media as part of the blended learning efforts to complement blended learning courses would help to enrich the students learning experience.
Research Questions

The research question were formulated:
1. What were the students’ perception on using Twitter as part of a blended learning course?
2. Did the familiarity in using Twitter help the students to use it as a learning tool?

Research Objectives

The objectives of the research were:
RO1: To find out the students’ perception on using Twitter for learning to complement blended learning courses.
RO2: To study the relationship of the length of time the students have been active on Twitter and their perception on using Twitter for learning.
RO3: To study the relationship of ICT skills level of the students and their perception on using Twitter for learning.

Scope of the Study

This study was a preliminary survey on using Twitter to complement the blended learning courses in UiTM Sarawak. The respondents were limited to students taking social science subjects and computer sciences subjects. The selected respondents all had Twitter accounts and the lecturers had been using Twitter to encourage more students’ self-learning time (SLT).

Literature Review and Conceptual Framework

Technology in learning refers to the blending together of multimedia and social media resulting in the internet of things which is part of Industrial Revolution 4.0 (IR4.0). For the current generation of university students who are millenials, they take these technologies for granted as it is part of their everyday life. They are always connected to the internet 24/7. Compared to previous generation of students who are attached to the cumbersome desks and personal computers perusing over information on the internet to study, the millenials are free and mobile due to the availability of portable tablets, and smartphone that keep them online wherever they are. These gadgets are now a neccesity as a tool for learning and education. Thus, the university must keep up and change the way they deliver information and make use of the internet as part of the teaching tools to bring lecturers and students together in an interactive learning session. One of the ways is to make teaching and learning mobile by using existing social media as one fo the platforms to enable students to learn wherever and whenever they want.
In Malaysia, the Ministry of Education’s definition of Blended Learning is “A mix of face-to-face and online learning mode where between 30-80 percent of the course content and activities are delivered online [8], besides interacting with lecturers in face-to-face (f2f) sessions such as lectures and tutorials. Students can also interact online through the i-Learn platform, a Learning Management Systems (LMS) in UiTM. This method is known as blended learning which also include students self-learning time (SLT). However, the effectiveness and efficiency of i-Learn depends on the continuous upgrading and support of the online learning platform system itself. A study to find out UiTM students’ perception on possible benefit of technology usages in learning shows that the highest number of technology tools used by the students is social media, followed by i-Learn [9].

There are many social media applications or social network sites available, such as Facebook, Instagram, Snapchat, LinkedIn and others, that allow anyone to post and share nearly everything online. Ellison [10] defined social network sites as “public web-based services that allow users to develop a personal profile, identify other users with whom they have a connection, read and react to postings made by other users on the site, and send and receive messages either privately or publicly”. Twitter as an status update services, also known as micro blogging services allows users to share short updates about people or events and to see updates tweeted by others. Nowadays, Twitter use is not limited to social activities. Many organizations and individuals uses the application to market their products, to communicate and share knowledge and information. According to an online article titled “Twitter in Higher Education” (Elon University), Twitter is used by professors, students, university staff, companies, news organizations, artists, non-profit organizations and celebrities to reach their desired audience known as ‘followers’. Using short message service or SMS, Twitter enables its users to quickly share information with their followers.

There are numerous benefits of using social media in education. Hopkins [11] listed out increased collaboration; increased students participation; and ease of review for team projects as the advantages of using social media. However, he urged that clear guidelines for the students need to be set in place before using social media to prevent distraction and the misuse of the social media to post inappropriate contents. Mantiri [7] also concurred that the use of technology is beneficial for the students as it provide availability of online information and simulation, allowing students to access the real-life-situation. They also found that most students have positive experience in using Twitter as part of the learning process.

However, there are some studies that found that the students’ familiarity with Twitter might influence their experience. For example, in a research conducted by [12], the results shown that the respondents had only moderate level of skills in using Twitter for learning and many of the respondents indicated that they will not used Twitter as a learning tool as most of them are more familiar with
Facebook compared to Twitter. Similar result was obtained by [13] who found that the respondents were frustrated when using Twitter to discuss topics during lectures. The experiences and knowledge of using Twitter thus give impact on the student’s perception on the benefits of using Twitter for learning. Hence, [13] emphasized that for Twitter to be an active learning tool, lecturers need to ensure that the students can conceptualize it as a way to collaborate with their peers academically, as a learning process, and as a way to facilitate thoughtful engagement with course materials that will aid all students. Meanwhile, [9] found that there is a significant relationship between the rate of ICT literacy and the students’ perception on perceived benefits of using technology such as Twitter in learning.

Thus, this study looked at how students’ perceived the benefits of using Twitter to learning based on whether they thought that it would help to build cognitive skills, empower communication skills, save learning time, and create learning experience for them.

**Conceptual Framework**

The conceptual framework is shown in Figure 1.

![Conceptual Framework](image)

**RESEARCH METHOD**

A descriptive research design was used that included correlation study between the various variables and a cross sectional study whereby the research instrument was an online questionnaire (adapted and amended from [9]). The unit of analysis were the students taking Structured Programming (CSC138) and
Seminar in Global Affairs (ADS660) in UiTM Sarawak. The total sample size of students taking CSC138 was 26 and ADS660 was 43 totalling to 69. The sampling technique used was purposive sampling as these were the students using Twitter in their learning activities. The data obtained was then analyzed using SPSS software.

FINDINGS

Respondents’ profile

This section provides the analysis of students’ profile based on gender, program enrolled, courses that they registered, where twitter was used as one of the medium for blended learning and the level of their ICT skills. The frequency and the time length spent by the students on Twitter were collected from the questionnaires.

<table>
<thead>
<tr>
<th>Program</th>
<th>Course Taken</th>
<th>Male Frequency (N)</th>
<th>Male (%)</th>
<th>Female Frequency (N)</th>
<th>Female (%)</th>
<th>Total Frequency (N)</th>
<th>Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AM228</td>
<td>Seminar in Global Affairs (ADS660)</td>
<td>7</td>
<td>16.28</td>
<td>36</td>
<td>83.72</td>
<td>43</td>
<td>62.32</td>
</tr>
<tr>
<td>CS110</td>
<td>Structured Programming (CSC138)</td>
<td>9</td>
<td>34.62</td>
<td>17</td>
<td>65.38</td>
<td>26</td>
<td>37.68</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>16</strong></td>
<td><strong>23.19</strong></td>
<td><strong>53</strong></td>
<td><strong>76.81</strong></td>
<td><strong>69</strong></td>
<td><strong>100.00</strong></td>
</tr>
</tbody>
</table>

Table I shows that among the 69 respondents involved, 43 respondents were from Bachelor of Administrative Science (AM228) and another 26 respondents from Diploma in Computer Science (CS110). Majority of the respondents for this study were female consisting of 76.81% from the overall number of respondents. The two courses used in this study, where Twitter was used as one of the medium for conducting blended learning in the classes were Seminar in Global Affairs (ADS660) and Structured Programming (CSC138).
TABLE II. THE LENGTH OF RESPONDENTS’ EXPERIENCE IN USING TWITTER

<table>
<thead>
<tr>
<th>Program</th>
<th>&gt; 12 months</th>
<th>10-12 months</th>
<th>7-9 months</th>
<th>4-6 months</th>
<th>1-3 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>AM228</td>
<td>16</td>
<td>37%</td>
<td>2</td>
<td>5%</td>
<td>1</td>
</tr>
<tr>
<td>CS110</td>
<td>13</td>
<td>50%</td>
<td>0</td>
<td>0%</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>29</td>
<td>42%</td>
<td>2</td>
<td>3%</td>
<td>3</td>
</tr>
</tbody>
</table>

Based on Table II, about 42% of the respondents were already familiar in using Twitter. Meanwhile about 28% of the respondents were new users, as they have been using Twitter for about one to two months.

![Figure 2. Rate of ICT Skills](image)

Based on Figure 2, the highest rating of students’ ICT skill was “Good” which made up 62.3%, followed by “Excellent” (21.7%) and the rest 16% of them was in the category of “Moderate” in ICT skills. Figure shows 58% students spent their time to check their Twitter account once a day, 20.3% between 2-5 times a day, 11.6% between 6-10 times a day and only 10.1% respondents checking Twitter more than 10 times a day. These levels of ICT skills were also affected by the familiarity or how long the students had been using Twitter which is shown in Table II.

![Figure 3. The Frequency of Respondents Checking Their Twitter Account Daily](image)
Based on Figure 4, about 46 students (60%) followed topics which were related to their courses. Majority of the respondents totalling to 52 (75.4%) followed twitter accounts relating to News. Meanwhile, 68.1% of the respondents followed Twitter accounts relating to NGOs/hobbies/Interest.

In the first objective of this research to find out the students’ perception on using Twitter for learning, the four independent variables used in this research questions were build cognitive skills, empower communication skills, save learning time and create learning experience with their perception on using Twitter for learning as the dependent variable. From Table III, the highest mean score of 4.6739 was obtained from dependent variable: create learning experience with standard deviation .76932, followed by save learning time with mean score 4.5921. These indicated that using Twitter for learning has a positive impact on students. As a result, the students have a good perception towards using Twitter for learning. Meanwhile, empower communication skills ranked third with mean score of 4.2692 and build cognitive skill scored the lowest mean of 4.0621 with Standard Deviation .077726.

A Spearman's correlation was run to assess the relationship between length of time using Twitter and their perception on learning using Twitter. Based on the results of the study as shown in Table IV, length of time using Twitter and their perception were not statistically significantly correlated but were independent of
one another ($r_s(69)=.117$, $p=.340$). Thus, there is inconclusive evidence about the significance of the association between the variables.

### TABLE IV. CORRELATIONS BETWEEN TIME SPENT ON TWITTER AND LEARNING BENEFITS

<table>
<thead>
<tr>
<th>Spearman's rho</th>
<th>Time Length</th>
<th>Correlation Coefficient</th>
<th>Sig. (2-tailed)</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Length</td>
<td>CogSkill</td>
<td>ComSkill</td>
<td>SavesTime</td>
</tr>
<tr>
<td></td>
<td>1.000</td>
<td>.155</td>
<td>.219</td>
<td>-.011</td>
</tr>
<tr>
<td></td>
<td>.</td>
<td>.204</td>
<td>.071</td>
<td>.931</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

A Spearman’s correlation was run to assess the relationship between ICT skills level and their perception on learning using Twitter. Based on the results of the study shown in Table V, the respondents’ ICT skill level using Twitter and their perception were not statistically significantly correlated but were independent of one another ($r_s(69)=.071$, $p=.563$). There is inconclusive evidence about the significance of the association between the variables.

The findings of this study shows that students of Bachelor of Administrative Science taking Seminar in Global Affairs, and Diploma in Computer Science taking Structured Programming, perceived that using Twitter in blended learning courses give positive impact in their learning experiences, as well as diversifying their learning methods. The respondents also agreed that using Twitter in learning can save their learning time, as in the ability to access knowledge is faster and more convenient. Using Twitter also can further help the students to improve their communication skills in online collaboration with their lecturers and classmates. These are supported by previous researches [7, 11]. However, there were no significant correlations between the length of time spent on Twitter and the ICT skills level of the respondents with their perception on learning using Twitter. This is different from previous researches’ findings, which found that the students’ lack of experience in using Twitter led to frustration and the students only had moderate preference in using Twitter in higher education [12, 13].

### TABLE V. CORRELATIONS BETWEEN LEVEL OF ICT SKILLS AND LEARNING SKILLS

<table>
<thead>
<tr>
<th>Spearman's rho</th>
<th>ICTLSkill</th>
<th>Correlation Coefficient</th>
<th>Sig. (2-tailed)</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ICTSkill</td>
<td>CogSkill</td>
<td>ComSkill</td>
<td>SavesTime</td>
</tr>
<tr>
<td></td>
<td>1.000</td>
<td>.151</td>
<td>.039</td>
<td>-.073</td>
</tr>
<tr>
<td></td>
<td>.</td>
<td>.215</td>
<td>.750</td>
<td>.551</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).
Implications of the Study

Based on the findings of this study, it is recommended that the institutions of higher learning should enhance the teaching and learning methods by incorporating social media into blended learning courses. The lecturers are also encouraged to embrace social media as part of the teaching aid to complement blended learning courses. In addition, this study implies that the students are to understand that social media can be used as a learning tool to gain more information to enrich their learning experiences.

Limitation of the Study and Recommendation

The scope of this study is limited only to students taking Structured Programming and Seminar in Global Affairs in UiTM Sarawak Samarahan 2. Further research needs to be done to see if similar results will be obtained for other subjects and programmes.

CONCLUSIONS

Regardless of their background and preliminary experience in using Twitter, the respondents are able to conduct their learning using Twitter and they still have positive perception on using Twitter in their learning. Therefore, Twitter can be introduced as tool for conducting blended learning courses to vast variety of subject matters and students.

REFERENCES