Original Paper

Using Mobile Devices to Access Social Media Networks:

Students Learning through Web Quest Technique

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Abstract

This study aims to explore the effect of mobile devices and social media networks supported with Web Quest on student's communication and motivation skills. A web Quest was used for implementing the study as a way that enables learners to research on the web to navigate digital learning materials. This study presents the findings on students' perspectives when searching the social media networks via their mobile devices following the Web Quest steps for achieving learning activities. The study follows the qualitative approach, the student's used mobile devices to accomplish the learning tasks. The data were collected through a student questionnaire. The findings indicated that the use of mobile devices and social media networks provided opportunities for engaging in learning and increased students' cooperation. The results also indicated that students enjoyed and appreciated the Web Quest technique. Additionally, students recognized the importance of using mobile devices as tools for education purposes, and acquired the values of group collaboration.

Keywords

social networks, mobile devices, web quest

1. Introduction

The development of computers and wireless technology have changed the way of people life and communication, especially social networking sites and mobile devices that are used for sharing information and communication among different people around the world. These types of technologies have increased communication and interaction among people in the world, especially students in an educational institution. Selwyn (2012) in his research on social media in higher education reported that the most significant of social media networks for higher education is the use of social media for educational purpose which will provide the students with a new learning environment, and increase

their learning motivation and communication. Many researchers like Guy (2012) pointed out the use of mobile devices and social media networks were increasingly becoming vital learning tools to be used alongside the traditional learning environment to support instructors to develop the learning materials. The use of mobile technologies will meet the new generations making it interesting for them, and will cater to the modern school environment. As a result, this situation encourages many educational institutions to implement social media and mobile devices as learning tools to increase learning performance, and to develop the learning environment. Mason and Rennie (2008) stated that, there were many social media networks which were considered as educational tools for example; Wikipedia, blogger, folksonomy sites such as del.icio.us and Flicker, YouTube, Google doc and relevant websites. These tools enable students to use them both inside and outside the classroom, students can research or navigate for accessing learning materials, collecting data from the internet, discussing a subject idea with their colleagues, sharing videos and photos, publishing their educational works, and completing their teaching and learning tasks. Regarding implementing Web Quest in teaching and learning activities, there were many studies that pointed out , the Web Quests have a positive impact on students learning collaboration, motivation, problems solving, and engaging. Moreover, the Web Quest was considered as an effective way for promoting students higher critical thinking (Drozd & Donoghue, 2007; Gülbahar et al., 2010). Web Quest is an activity based on constructivism learning theory. The learners build their own skills and knowledge by practicing. In this study, the learners worked in groups, in the way that enables them to discuss and participate in order to create more knowledge, and then reflect what they have learnt through the Web Quest tasks or activities. In order to increase student's communication and collaboration skills, the study follows the Web Quest as a way of building learning materials on the web and making it accessible for the students, and then the student works in a cooperative manner in the learning activities. Meanwhile the study focused on using mobile devices to access social media networks for educational purposes.

2. Related Work

The rapid evolution in the era of web-based and mobile technologies bring new opportunities for both teachers and students for achieving their academic purposes (Janosch, 2013). In addition to the face-to-face classroom, the teachers can prepare learning materials cloud in an online learning environment with different learning context, to be accessed by the learners, and the students can use their mobile devices to navigate or research following the links provided by their teachers for completing learning activities. Many researchers have reported the potential of using cell phones as instructional tools to be used in educational settings (Feng-Kuang et al., 2015). In the study that was conducted by Begum (2011) which aimed to explore the students' prospects using cell phones as instructional tools, the study findings reported that, the cell phone has great potential as an instructional tool that enables users to achieve a variety of educational activities and purposes. Moreover, the use of

mobile devices will make the learning environment more meaningful and increase student communication skills (Okunbor & Retta, 2008). Other researchers like Cakir (2015) stated that, mobile phones offer unique functions including Short Message Service (SMS), voice-messaging, Multimedia Messaging Service (MMS), internet access, video recording, voice recording, MP3/MP4 player, digital camera, and capabilities to access social networking platforms such as Facebook, Twitter, WhatsApp etc. All these functions (Table 1) could be used for teaching and learning purposes to make educational learning environments more attractive as well as promoting students higher critical thinking. The term social networks is used to refer to any Web sites that enable users to articulate a network of connections and accessing information, news, status updates, post comments, photos, or other forms of content (Steinfield et al., 2012; Dewing, 2010). Tiryakioglu and Erzurum (2011) stated that, the concept of social media refers to platforms such as social networks site, blogs or micro-blogs, and forums where self-generated content of users are shared by the user like a publisher. Nowadays, many education institutions "universities, colleges, schools", have been using social networking tools for developing the learning environments, and to achieve the teaching and learning purposes. Many researchers have argued that the use of social network technology tools for learning and teaching has positive impacts on students learning (Veletsianos, 2011; Parise & Crosina, 2012; Almu & Buhari, 2014). Using online social networks as educational platforms may support learners to combine social connection with other classmates and support engaging while they perform their learning activities (Greenhow, 2011; Browning et al., 2011; Mayisela, 2013); so far, they can access digital learning materials located on the web. Therefore, using mobile devices and social networking tools could provide educational opportunities for students to access course content, and interact with instructors and colleagues wherever they are. Accordingly, this study aimed to explore student's communication and motivation using mobile devices as tools, the learning method was implemented through the Web Quest to provide students with a good learning environment that increases students learning motivation and communication.

Table 1. Mobile Tools and Functions

Mobile Tools	Function
SMS	To send text messages
Camera	To take a photo
MMS	To send photo and video
Recorder	For recording sound/video
MP3/MP4	For listing what was already recorded
Memory	For data storage
Apps	For different purposes (e.g.communication)
Browsers	To navigate the Internet
GPS	To provides geolocation and time information
QR Code	To scan and generate for accessing information

2. Method

The purpose of this study mainly was to explore the potential of mobile devices and social media network in promoting students' communication and motivation. To evaluate the effectiveness of this study, the student questionnaire was conducted for undergraduate students-electrical engineering course to gather students' perspective after completed the course. The data were analyzed using Statistical Package for Social Sciences (SPSS).

2.1 Procedures

The procedures of this study were conducted for undergraduate students in technological college, located in Sudan, the data of this study back to 2014, when students were studied an electrical engineering subject, which aimed to provide students with a rich online learning environments, to be accessed using their mobile devices. In this study, the stages of Web Quest were implemented, and students using mobile devices for accessing online learning materials. At the beginning, the learning materials were collected and developed on the "Blogger", accordingly the social networks and other resources that support students learning were recommended. Moreover, the students were orientated on how mobile devices can be used. The procedures follow the Web Quest strategy were described below:

(1) Introduction: This section typically provides the students brief information on the topic "electrical engineering " to become aware of the learning subject.

(2) Task: This section of the Web Quest includes various activities that should be achieved by the students as groups, the students were notified on what they are supposed to accomplish.

(3) Resources: Students were provided with links to high-quality Internet-based resources, which help them to complete their learning activities.

(4) Process: This section outlined the steps that students need to follow as well as the resources that students need to achieve the tasks. Also, this section of the Web Quest contains many of social

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networks sites such as Ficker, Quia and YouTube which enable students accessing to learning materials relevant to the learning activities.

(5) Evaluation: The evaluation section of the Web Quest requires all students to participate in the final exam that was created online through "Quiz maker see https://www.onlinequizcreator.com/log-in/item114?logout=1", additionally, the evaluation section includes the questionnaire used to explore the student motivation.

(6) Conclusion: At the end of the course, students were requested to send SMS (text) messages to the teachers as feedback to inform them about the course information acquisition.

This study implemented a variety of social media networks, accessed by mobile. The teaching and learning strategy was the Web Quest technique as described earlier. At the end of the course, the students asked to respond on their perspective through a questionnaire (Table 2).

2.2 Participants

To encourage students to incorporate social networks and mobile devices benefits into the learning activities, 25 undergraduate students at Wadmdni Technical College in Sudan participated in this study. The participants have mobile devices and familiar accessing online learning materials.

2.3 Measuring Tools

The method of data collection used in this study was a questionnaire, the data were collected in one week after the students completed the course, and they were examined online through the online social media networks, the students received email, text message "requested them to fill the questionnaire which was designed to gain students' perspectives on using social media networking and mobile devices". Table 2 shows the student's questionnaire reflection.

3. The Results

Table 2 shows the results of the questionnaire of students' perspective, using mobile devices and social media networks. From the statistics, the results shown that most of the students felt satisfied. Among them, majority of the respondent's use social networking websites (mean = 3.7 (1.38)). And also, most of respondent's engage themselves using mobile learning (mean = 4 (1.14)), and the guidance provided by mobile learning (mean = 4.4 (0.81)). The student questionnaire also shows that the majority of them,confirmed that, they explored new tools for learning (mean = 3.9 (1.10)), and these new ways of learning makes them want to know more about web-based learning (mean = 3.8 (1.17)).

Table 2. Results of the Questionnaire of Students' Perspective

Questionnaire Item	Mean	S. D
Use Social network websites help to engage.	3.7	1.38
Use social networking provides better learning environments.	3.3	1.33
I felt very interestingly when using social networks to achieve my learning task.	3.4	1.32
Social media networking increases my understanding.	3.7	1.37
Social networks increase my learning motivation.	3.6	1.05
With mobile learning, I can achieve my learning task more quickly .	3.5	1.14
M-learning, encourage collaborative work.	3.5	1.26
Using M-learning save my time.	3.2	1.04
I feel engaged while using mobile learning.	4	1.14
Learning with social networks was more interesting than traditional learning.	3.1	1.21
The guidance provided by the Mobile learning is easy to understand and follow.	4.4	0.81
The new way of learning makes me want to know more about web-based learning.	3.8	1.17
I explored new tools for learning.	3.9	1.10

4. Discussion

This study primarily aims to explore the effect of mobile devices and social media network supported with Web Quest on the students' communication and motivation. The results indicated that, the Web Quest learning environment motivated students. This result is supported with other studies that reported the positive effect of the Web Quest implemented on students learning (Aina & Sofowora, 2013; Abu-Elwan, 2007). The results also revealed that, the Web Quest learning environment was motivated students to work collaboratively and in groups discussion, so that the students were gained the values of cooperative work, taking the learning responsibility and developing the technology skills. Additionally, the results revealed that, the use of mobile devices accessing social media networks were better learning environment which help students to feel very interesting. These findings similar to the study conducted by Feng-Kuanget et al. (2015) found that, the use of mobile devices as educational tools accessing digital learning materials were more enjoyable for students. Additionally, when the students use their mobile devices accessing social websites (social media learning), their responses indicated that, the mobile devices enable them to perform learning activities more quickly and save their time. This result supported by the result of study conducted by Hegazi and Eltayeb (2014), their study concludes that mobile learning technologies meet learning purposes in the term of providing students advantages to perform learning activities more quickly. At the end of studying the course (in section of the conclusion), the participants sent messages to the teacher to reflect on their impression and motivation about the course, their messages have stated positive impression on the use of mobile

and social media based Web Quest Technique as method of learning. Moreover, the statements of students shown highly motivation such as "I learned something new, I developed my technology skills, I like this way of teaching, I learned from my colleagues, etc.". The author has to state that, the new generations of the students are very familiar with using mobile technologies and mobile devices are becoming part of their everyday life. Such conditions are very useful for teachers, educators, or instructional designers to provide students learning accessed by their mobile devices. Therefore, the instructors, teachers, educators must develop their digital learning skills to provide students learning to be accessed by their mobile devices.

5. Conclusion and Limitation

This study concludes that using Mobile Devices to Access Social Media Networks based on the Web Quest, increased students learning motivation and cooperation as well as provide them with a better learning environment. On the other hand, the values of using mobile devices for learning purposes were achieved during the students implemented mobile devices. In the term of the limitation, the study is limited to the small number of participants and only used a motivation questionnaire, instead of other data collection, for the future studies the author recommended that, the numbers of participants should be increased and studies will have to be focused on quantitative studies to examine students during learning activities.

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