

The use of social media for final year undergraduate project supervision

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ABSTRACT: The aim of this study was to investigate students' and faculty members' perspectives towards the use of on-line tools for supporting final year undergraduate project supervision. The study involved 43 students and 10 faculty members (project supervisors). Data were collected via a questionnaire and structured interviews. Findings indicated that both students and supervisors prefer to use social media more than learning management systems. WhatsApp was opted for as the best among the social media apps. The main reason for this option is because the app is already available on smartphones, and checking the app has been a part of their daily life. A messaging facility is the top facility of usage. All participants log onto their social media accounts almost every hour, while the majority of them log onto LMS when necessary. Exploring research ideas is the main supervision activity that can be done through the app. However, on-line supervision is not a great means for supervising students in project development. Supervisors also agree that students' self-reliance can be assessed through on-line supervision.

INTRODUCTION

The Internet and mobile computing have become the greatest innovations in this era. *Whoever we are, and whatever we do, we all* use the Internet almost every hour. The invention of the smartphone has dramatically changed people's life around the globe. A smartphone is a *mini computer*, and it can be kept in a trouser pocket. Smartphones have been used to replace desktop or mobile computers. Any activities, which can be performed on desktop or mobile computers, such as information retrieval, sending and receiving emails, browsing and shopping, can also be done easily and freely through smartphones.

Furthermore, the invention of social media technology has made the use of smartphones more intriguing and exciting. The social media apps such as Facebook, Twitter, YouTube, WhatsApp, Instagram, and many more are available freely and can be installed any time on any type of smartphone. These apps are usually classified by social interaction, content sharing and collective intelligence.

The use of social media in society has been studied by many researchers. The studies have been conducted on many issues and aspects, including how a non-profit organisation community makes use of social media [1], the effects of social media on mental health [2], the use of social media in medical situations [3], the implication of social media on health communication [4], the use of social media for political engagement [5] and the use of social media for building up relationships [6]. There is also a growing trend for using social media technology to enhance or supplement the traditional university teaching and learning. Social media technology can offer new ways of teaching and learning by encouraging communication and collaboration between students and instructors.

In education, social media can be used to share information with students, collect information, conduct research, share personal academic interests with other people, engage students beyond the classroom, and enhance e-textbook functions by connecting students with social tools for collaborative purposes [6]. Studies also show that using social media can help achieve learning outcomes [7]. The social media not only allow students to develop relationships through management and feedback from the instructors, but also expose students to multiple forms of literacy, interpretation, critique, creativity and expanded audience [8]. Instructors can leverage social networking platforms to provide additional times and places for increased communication, collaboration and participation. Research conducted by Lau at al, identified that social media also develop students' capacity to create and arouse their interests in academic subjects and students more easily communicate with working professionals through social media [9]. Social media foster communication among teachers, students, parents and community members, and help create on-line professional learning communities [10].

According to the latest Google study, the Kingdom of Saudi Arabia is one of the countries with the highest level of penetration of smartphones and social media technologies. In addition, research conducted by a Saudi university had identified that nearly all Saudi students own a smartphone [11].

The purpose of this study was to identify the perspectives of students and supervisors towards the use of social media apps for teaching and learning in the final year undergraduate project.

RESEARCH AND METHOD

The authors used a questionnaire and structured interviews to collect data from students who enrolled for the final year projects, and faculty members who were responsible for supervising the projects of students majoring in computer science, information technology or information systems at the Northern Border University (NBU), Kingdom of Saudi Arabia. A total of 43 students and 10 faculty members volunteered to participate in this study. At the NBU, students are expected to complete their final year projects in two semesters. In the first semester, students are required to prepare a complete proposal, consisting of three main chapters; introduction, literature survey and system analysis, and design (Project 1).

In the second semester, students must implement the system using a specified programming language and discuss results of the project (Project 2). Project supervisors are normally selected based on expertise and interests. Students who enrol for the final year projects are automatically registered as users of the University's learning management system Blackboard. Supervisors are encouraged to use Blackboard in supervising and managing their students. However, LMSs, such as Blackboard or Moodle have fewer opportunities for users to build an on-line social presence [12].

Besides Blackboard, supervisors are free to use any on-line tool to serve the same purpose. Thus, with the popularity of smartphones and social media, the authors would like to determine the perspective and practice of students and faculty members towards using a social media technology for on-line supervision. This study is guided by the following seven research questions:

RQ1: What is the best choice of on-line tools?

RQ2: What is the best social media application for supervising and managing final year projects?

RQ3: How often do students and supervisors log onto LMS and social media accounts?

RQ4: What type of supervision activities can be achieved through on-line supervision?

RQ5: What is the most useful on-line application facility in on-line supervision?

RQ6: Can social media be a means to support deep learning?

RQ7: What type of assessment can be done through on-line supervision?

DATA ANALYSIS

Investigation into the demographic variables indicated that out of the 43 student respondents, 65% were female, while the remaining 35% were male. In terms of the number of supervisors, 50% out of 10 supervisors were male. Each faculty member can supervise only one group project. Each group consists of three to five students. Table 1 shows the gender distribution of students and supervisors of the survey participants. The NBU is one of the universities, which apply gender desegregation, where male supervisors can supervise male and female students, and female supervisors only supervise female students. There is no gender mix in student groups.

Table 1: Genders of supervisors and students.

| | Male | Female |
|-------------|------|--------|
| Supervisors | 5 | 5 |
| Students | 15 | 28 |

To answer RQ1, students and supervisors were asked to make a choice between learning management systems (Blackboard) and social media apps for managing and supervising the final year projects. All students and supervisors had selected the social media. Based on the choice, students and supervisors were asked to choose the best social media app to serve the purpose (RQ2).

Among the listed options were Facebook, WhatsApp, Twitter, Google+ and Instagram. Data analysis reveals that all participants had chosen WhatsApp as the option of choice. To determine the reasons behind the choice of the options, participants were asked to select a list of options as shown in Table 2. The highest score for choosing social media is the app already available on their smartphones, followed by the activity of checking social media that has been a part of their life, and the least score is having a feeling of personal touch with the group members.

Table 2: Reasons for choosing the social media app.

| | Frequency of response |
|---|-----------------------|
| Social media app is already installed on my smartphone | 100% |
| Checking social media, a part of my daily activities | 95% |
| Social media is available on my smartphone | 97% |
| Social media app has a notification facility | 90% |
| I can express my feelings through emoji | 85% |
| It is fun and easy to use social media app | 87% |
| I feel I have a personal touch with my group members on on-line social networks | 10% |

Interestingly, all participants log onto their social media account almost every hour, while the majority of the participants log onto LMS when necessary (RQ3). Figure 1 illustrates the frequency of accessing the social media and LMS. This finding supports the finding of RQ1 and RQ2.

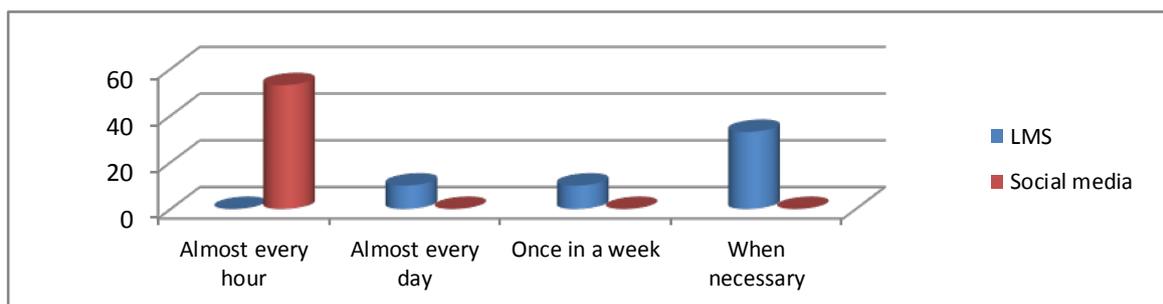


Figure 1: The frequency of accessing on-line applications.

To answer RQ4, participants were asked to make multiple selections of supervision activities which can be achieved through on-line supervision. Data analysis reveals all participants believed that exploring research ideas can be done through on-line supervision. However, the development activity had the lowest score. In the development stage, students are supposed to write, execute and run a programming code. Thus, this finding suggests that development activity requires off-line supervision as students may need to sit down with their supervisor to detect the faults in the code.

Table 3: Supervision activities which can be achieved through an on-line application.

| Supervision activities | Frequency percentage of response |
|---|----------------------------------|
| Exploration (exploring research ideas) | 100% |
| Formalisation (formalising research idea into a project plan) | 93% |
| Preparation (collecting relevant information for the project) | 70% |
| Development (implementing the project using specified programming language) | 35% |
| Reporting (preparing a final project report) | 70% |
| Presentation preparation (preparing for the final project presentation) | 70% |

To explore which facility of on-line apps was the most useful for the purpose of teaching and learning (RQ5), participants were asked to make multiple selections of apps' facilities, of these they used often. Figure 2 shows that *messaging* is the most useful facility for teaching and learning, and the *sending video* facility was the least used.

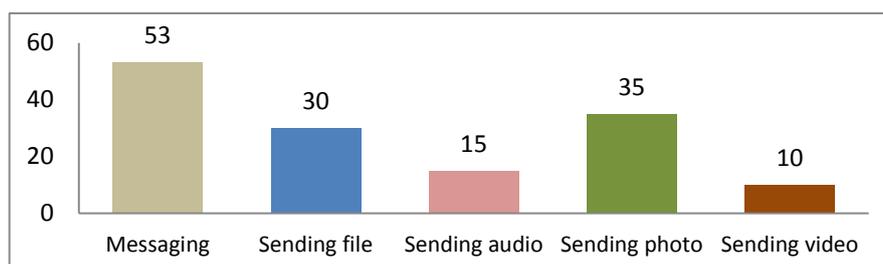


Figure 2: The usage of on-line application facilities.

According to Biggs, peer interaction is considered to be one of the key elements of course design that supports deep learning [13]. Thus, one wants to capture the students' perceptions about using social media as a means for peer interaction (RQ6). The percentage responses of students for the four questions is shown in Table 4. The feedback was highly positive for the first three of four questions, indicating that social media can be used as a means to achieve deep learning.

Table 4: Perceptions of students (n = 40).

| Questions | Percentage of response | | |
|--|------------------------|----|-----------|
| | Yes | No | Undecided |
| The social media offer me a way for more interaction with my peers | 100 | 0 | 0 |
| The social media allow me to learn from my peers 24/7 and more fun | 100 | 0 | 0 |
| I feel free to discuss and collaborate on my ideas | 90 | 5 | 5 |
| I interact with my peer on-line more than off-line | 85 | 5 | 10 |

Supervisors were asked about the type of self-reliance assessments that could be done through on-line supervision (RQ 7). A list of options was given to the supervisors and they were asked to use a 5-point Likert scale from *strongly disagree*, to *strongly agree*. The options include assessment of own skills and strengths and weaknesses, seeking help on time (addressing the right experts with adequate questions), proper use of the support of his supervisor (and other resources), defence of own opinion, communication, creativity, team player, work schedule made, determination of own activities, own monitoring of progress, own evaluation, and adjustment and coping with criticism. Figure 4 illustrates supervisors' opinions about self-reliance assessments. Data analysis shows that a few of self-reliance assessments can be fully achieved through on-line activities, such as team work, determination of own activities and own monitoring of progress.

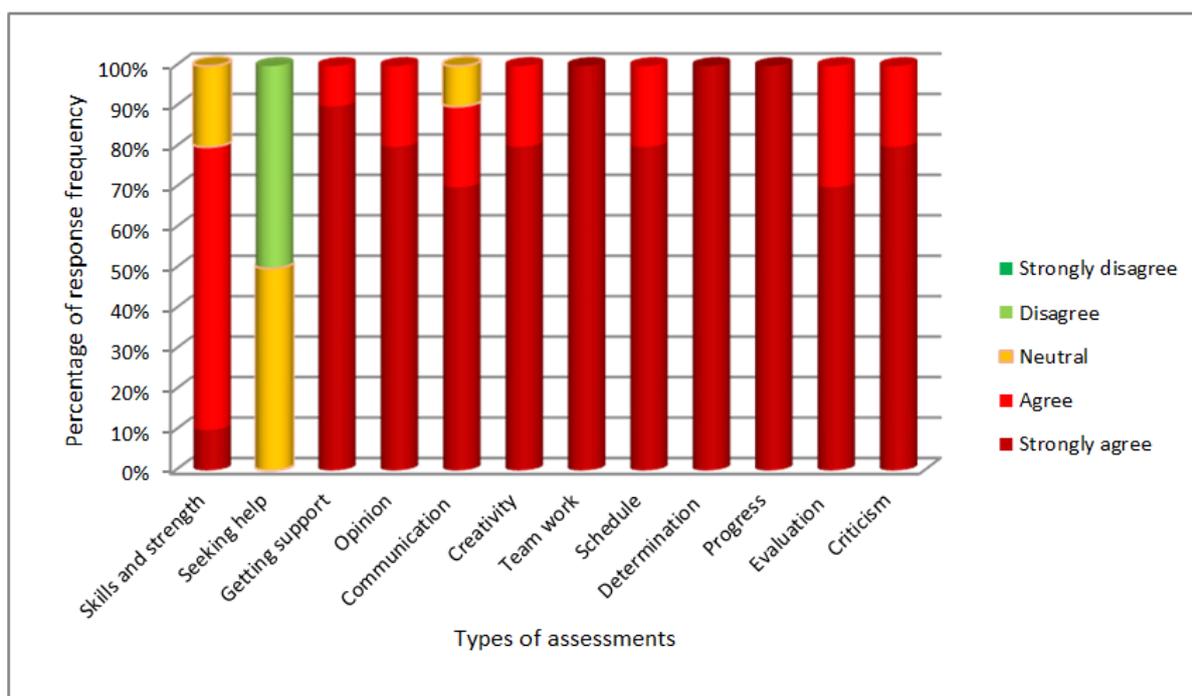


Figure 4. Types of self-reliance assessments.

CONCLUSIONS

Completing a final year undergraduate project is one of the requirements for graduation. This subject requires students to be more creative, independent thinking and to work in teams. Interaction among team members and the project supervisor is vital. The findings of this study reveal that checking social media has been a part of students' and faculty members' daily life, and they log onto to their social media accounts almost every hour. This finding is statistically significant compared with the finding that students and project supervisors chose a social media app, rather than LMS as a tool for communication and interaction during the supervision process.

Nearly all supervision activities can be done through social media apps. The feedback from the survey indicated that students and supervisors normally used the messaging facility to interact between themselves. Consequently, social media can be a means of achieving deep learning.

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