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Study Assistance by Social Methodology Application for Mobile Device

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Abstract: In the classroom mostly, student tend not to pay attention to reading long texts. It becomes a problem because a reader ignored this valuable information. We also observe that a short text has been viewed more than the long texts. For example, many Facebook users think that a long texting status might be boring than a short one. So that means, the information may not be able to spread throughout to everyone who related. Not mention by words of mouth. So, we decided to create an application that can be used to reduce those problems. The study was aimed for students and instructors can access through the web application to notification and alarm the users to encourage the students to be more motives in their study. Such as examination date, lecture lesson and assignment's task. Instructors can spread the necessary information to every student easily. To make this application success its objectives, instructors will enter the lessons that attractive the students by themselves. The research was aimed to use idea of repeating lesson by sending the shot text massage to student after class is used to remind student to keep think about their knowledge their have just acquired. This way is already popular same as update user status in social network application. Another objective of this application is to reduce the gap between students and instructors, make them communicate to each other. Instructors can post the lesson via web application. Students who participated instructor's class can read that lesson. With a push notification feature, it can greatly help remind the students inside the class about the recent post and allow students to see how many people that read each lesson. Moreover, instructors can freely set the time to post the lesson automatically. This feature can help instructors to post the lessons that connect to the previous one or to help them reduce the burden. These can make students easily receive necessary information and be able to study everywhere. This application works another small social network that use similar social status to provide study lesson between student and instructor and helps the students in their study.

Key words: Study assistance, web application, small social network, social status instructor, motives

INTRODUCTION

We observed that people tend not to pay attention to long texts such as book or long paragraph which corresponds to their study lessen. Seeing that the trend of social network communication is becoming significantly popular in university student, we also observe that short texts have been viewed more than the long texts. The Facebook status is a good example; users regularly update what are they up to or anything. The massage comes in a short message and every friend of use is also happy to read the status.

With is approach the status message would motives user to read. An exploratory observation shows that the student always use their mobile phone read everything in their Facebook very often when there are free. The after classroom learning process can be adopted by simulate the Facebook status and replaced by shot lesson message then simultaneously send to students in the class.

The interactive in the classroom is reported to produce benefits in relation to the raise of more active learning environments, the learning communities can base on ICT interface which represent of social network application, the provision of greater feedback for lecturers and it also gain more student motivation (Terry, 2002). However, using ICT to conduct class interactive is a difficult exercise in perspective. Lecturers may feel classes more interactive because they ask questions or accept questions but they frequently fail to inspect the quality, content, frequency or duration of the interactions in addition to the number of students who participate. Thoughts, project aims to reduce the gap between in classroom and after class room activity, lecturer can initiate interactivity after class by using short message like Facebook status to remain student to the in class lesson. The student who already seen message will be able to pass "Impressed" and "Comment" on each single message while the other student will received

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notification of with the other student have done. While, the event exist regarding the action of student in the social classroom, the other student will focusing on action of student who already read and passed "Impressed", the action will motivate someone else to find out what the message is.

MATERIALS AND METHODS

Various designations of interactivity exist in the literature which focus on the in classroom participation and technology. Moore (1989) defines key interactions as learner-content, learner-instructor and learner-learner. Also, there are different way to define interactivity aimed to the structure regarding loops, rationality and originator. Yacci (2000) define the interactivity as a message loop which is commenced and concluded by the student and the message content must be "mutually coherent" (Markett *et al*., 2006). Earlier definitions developed from communication and educational theories and are technology independent. In contrast (Liu *et al*., 2002) classify four types of interection by the medium of communication: face-to-face, computer-mediated, human-computer and simultaneous group (Terry, 2002).

Message loop: This research was aimed to use ICT system to be the interactivity for student and instructors and using interactive message loop same as social network program does. The principles of the interactive message loop are.

The interactive loop commenced and concluded by the student. Also, interactivity can occur unrelatedly of technology involving technology in all, some or none of the interaction stages (Terry, 2002) and the originating student 'owns' the interaction, determining if the loop is completed. Yacci (2000) has introduced model of interactivity, distinguished for the loop initiation with returning to Entity 1 (student) from Entity 2 (lecturer) (Fig. 1). The interactive loops were developed in the status message text thoughts our application there are three possible message paths for a student initiated message or the lecturer do in-class and after-class.

Figure 2 shows the action of Student A, the lecturer, the ICT interface and Student B. In divergence to Yacci (2000)'s Model where appropriate, the ICT is specifically referenced as a channel between participant's two splits of the interactive message loop.

The ICT interface is working as social network application and it simulating message sharing method of Facebook™. When the message is sent is arbitrated by

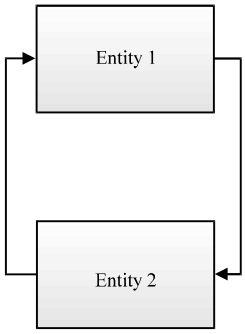

Fig. 1: A completed message loop between two entities (Yacci, 2000)

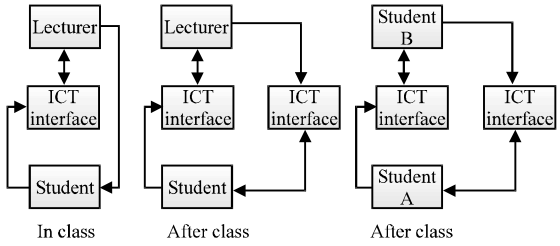

Fig. 2: Message (lesson) thoughts interactive message loops, A-B-C

ICT before Entity 1 and 2 can view the message. Afterward, the second haft of the loop is partially required to facilitated by ICT.

In the in class loop, the full interaction is in class, the second haft of loop is not facilitated by ICT. The after class loop B the lecturer's resend lesson by ICT to student. Lastly in after class loop C, two students interrelate after class via the ICT. The design allowed Student A originated the message loop and to replied to all of the classroom participants.

The after class section is the point to opening up the interactive prospective of sending the shot message lesson which shows in loop B and C, there create the original SMS and all comments to all participants.

In order to support the project interactivity and facilitate students' learning, both mobile application and web application were designed as tools. The mobile application used android operating system. This application designed for students and instructors. Instructors can access through the web application to create a new class and post the lessons in there. The lesson message status can be seen by the member inside the class. Students required joining in class to see all events that instructor and another student posted also application provides notification to notice users with any inactivity.

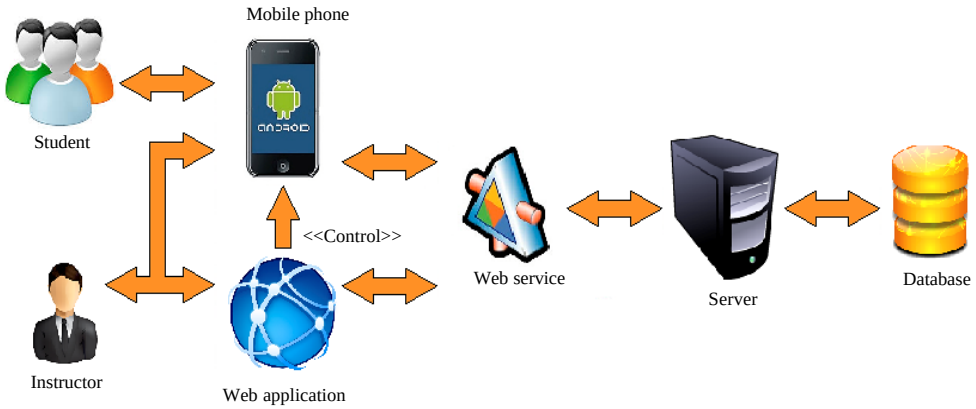

Fig. 3: System architecture of application

The applications were designed to make students more enthusiastic in studying: by keep tracking on what instructors posted. With the feature to criticize, the students can interact with their classmate or with the class's instructor without interrupting the in class activities (Liu *et al*., 2002) (Fig. 3). Student and instructorare main role of this design; the mobile application is ICT interface for student to make any in class and after class interaction also for instructor to use. Web application is a tool for instructor the application aimed to make lessons planning and post through the mobile application which shows student in classroom to view the lessons and receive the information. The application will enable instructor to create lesson submitting schedule as automatic submission or real time posting. Both sections provide the notification feature. For mobile phone, it aims to improve the student's motivation for studying. On web application be able to receive the request of joining the class room from the students. The web application create a new class by instructors, inside class, instructors can post the lessons into the mobile application.

Figure 4 illustrated action flow of application, the action starts with lecturer uses web application to create shot lesson message by post in real time or schedule to post at the pre-set time. The short message sent to mobile application while creating notification to everyone in the class room in their mobile to shows that the new lesson has been sent. Mobile application is the only way for student to see new lesson or previous lesson. In case of any student who already read the message may click "Impressed" this function works same as "Like" in Facebook™, the "Impressed" function will also create notification to the other student in class to draw attention in the particular message from the one who has not read

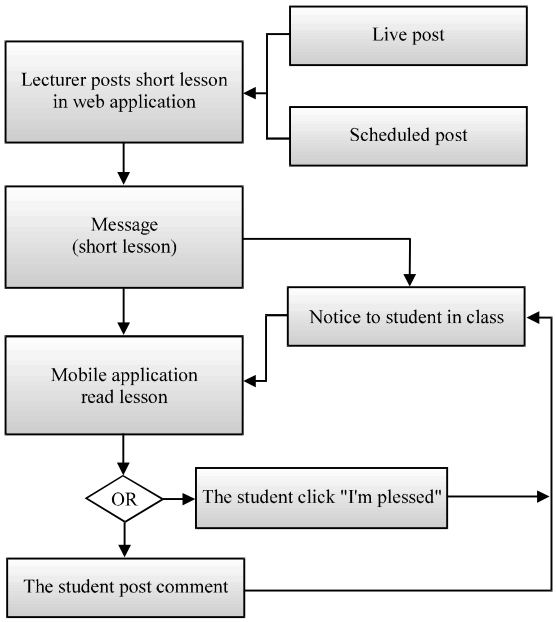

Fig. 4: Action flow of the ICT tools

it. Student also is able to post their comment regarding the message to ask or more additional information of the message, the notification will also create after place the comment to let everyone know about the interactivity.

RESULTS AND DISCUSSION

In first semester computer network class of 2013, consisted of 45 undergraduate software engineering students participated in this research. The class was held in the room with wireless internet access and students were allowed using their mobile phone to access the application during the class. Student could use mobile

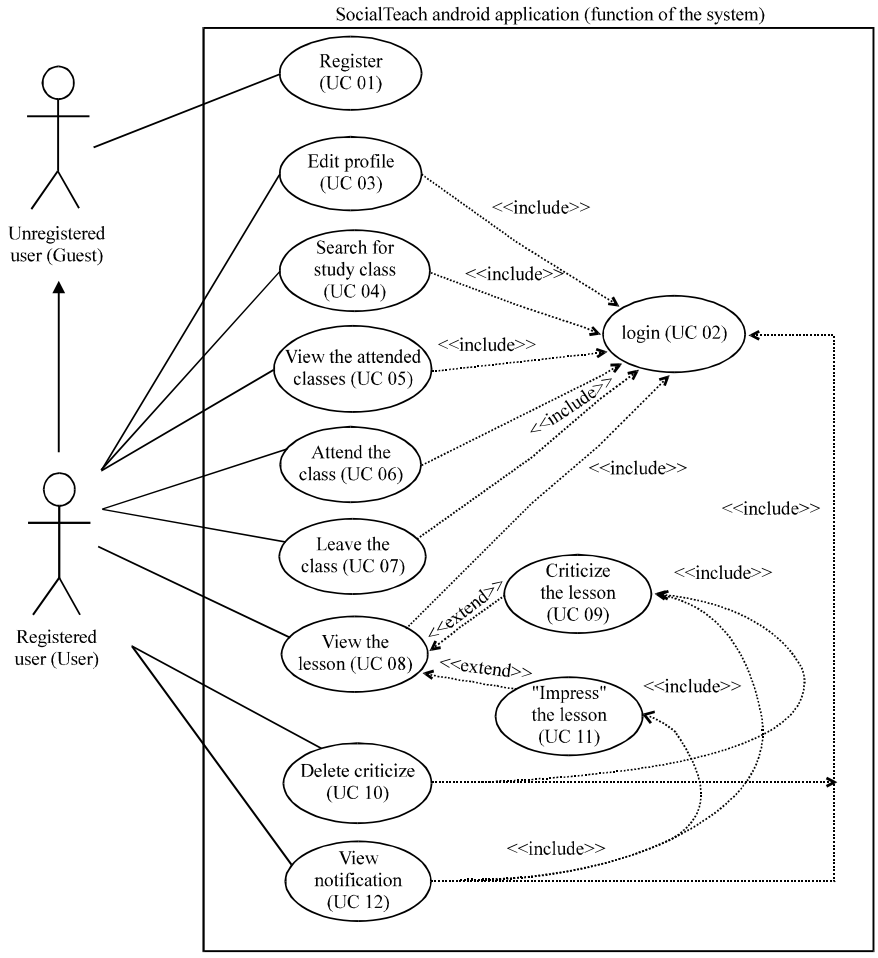

Fig. 5: Use case scenario of mobile application shows user interactivity

application to write any enquires or information in to the classroom also the classmate received notification and replied while there were sitting in the class.

This implementation of the application which handles in class interactivity in the case ends when the class ends. The after class is more concentration to implement by lecturer send short message repeated the recently in class lesson to web application and set time to post into mobile application is 4 h after the class ends. The short message lesson were separate in to 15 message per 50 min of in class lesson and has interval 4 h between each post to the mobile application from 9 am to 8.00 pm every day. Finally, student individually completed pre and post sub exam also the questionnaires and interviewed both student and lecturer shown positive result.

As discussed in the previous study, the key feature was aimed to created tools for distribute lesson by simulating social network status and notification mechanism to encourage student to read and understand the lesson in class and after class. Figure 5 is use case scenario which shows user functionality in mobile application. Use require to register as system member and as to join in any class which in the list. Since, when lecturer accepted the user to join in particular class, then user will be able to receive shot message lesson from lecturer. The criticize and impress function also available for response to the lecturer post. Furthermore, the program enable user to remove Impress and edit the criticize comment that they had post in each message.

CONCLUSION

This study demonstrates the lesson sending process and simulated social network methodology which can provide a new perspective in terms of after class study and interactivity of student in the class. While, the overall

Table 1: Questionnaire shown result after run the research

Questions	Agree (%)	Disagree (%)
The complicated lesson is hard to read in short message?	36.7	63.3
Sending message is too often and it bothering you?	21.1	78.9
Do you response to any of your friend's activity regarding to the sent message?	80.2	19.8
Do you acquire more understanding of the lesson what you already have studied in class?	76.4	23.6
Do you open message because of incoming of new message?	52.4	47.6
Do you open message following you friend click impress?	68.7	31.3

implementation produce positive results and provided interest feedback from student. Correspondingly, the resend lesson message after class and every responses which shown on system notificationis a motivating factor for student. Students are response to any action on system with 80.2% as a result which is reporting from the questionnaire.

Student midterm examination evaluation presents the advantage of system by increase score average of whole class comparing with previous semester. The primary concern of the analysis was to determine how could the tools can convince student open the application and read the message and also influence other student to read it by the first student action. Table 1 shows results of questionnaire from student after finished the research. Overall the positive result proved the origin concept of research in positive way. Student will have attention on friend's activity more than incoming of the message and their feels more comfortable to read it often comparing with read very long sentence in book which they are need more motivation and concentration.

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