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RESEARCH ARTICLE

SMART PHONE BASED SOCIAL NETWORKING FOR TEACHING & LEARNING

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Abstract—Smart devices are becoming popular for their extreme features and attributes. Currently, smart mobile devices are providing wireless communication using Wi-Fi, 3G and 2G network. Proliferation of network coverage and smart phone users make the use of warm embrace of social networking services easy and simple. With the perfection of wireless communication, mobile social networking has become a hot research topic at this moment. The characteristic of mobile devices along with software support allows us to solve the challenges to develop social networking platform for teaching learning.In this paper, we would like to propose a mobile based architecture that will allow students and faculty members to access for their required data. The mobile application will be used to transfer class content, lecture slides, e-books, and tutorials on the fly. The user will be able to place requests for teaching learning contents, blog their queries. On the other hand, the answer from any user will be presented in this system as soon as replied. The social network bridges the gap between students and teachers through knowledge dissemination.

Index Terms-Smart devices; social networking; wireless communication; dissemination

I. INTRODUCTION

Smart Phone Social Networking (SPSN) refers to social networking where individuals with similar interests connect with one another through their mobile devices. Similar to Web-based social networking, existing SPSN services (e.g., Facebook) occur in the virtual world, relying on full mobile access of the Internet. In this paper, we would like to presenta different form of SPSN – the Opportunistic SPSN, which aims to enhance spontaneous interaction/communication among people that opportunistically encounter in the physical world, without leveraging any infrastructure support. With the development of Internet of Things in recent years, smart devices are being prevalent in our daily life. Particularly, advanced smart phones that are equipped with various sensors (e.g., Bluetooth, Wi-Fi, GPS), provide a technical basis for the building of opportunistic networks.

II. PROBLEM STATEMENT

Desktop computers are not considered to be portable. They are not easy to move around. Laptop computers are considered portable, being more lightweight and easy to place in a backpack, but laptops with larger screens (about 17") can become bulky and more difficult to carry around. More powerful computing processors

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typically require greater amounts of power and cooling. Most computers do not have necessary sensors as well as smartphone but laptops rely of a Wi-Fi, Bluetoothsignal in order to connect to the Internet.Prices for a computer (desktop or laptop) can vary widely, depending on its capabilities, storage, and features. A more powerful computer will be more expensive.

Smartphone are now fully functional computers with a wide variety of applications and services that are rapidly gobbling up users' time and money. It is still more portable than any computer. They are very lightweight and can fit in a purse or pants pocket with ease. They are designed to be taken everywhere with you. Although processors of these smartphone are becoming more advanced and powerful. Due to their smaller screen size, user can take it pocket. Smartphones have a data plan that allows them to be connected to the Internet at all times as long as there is a reception between the phone and cell phone tower.It also vary in price based on power and various features but it is much cheaper than computers.

Smart phone based social networking is very much handy. The price of smart phone is not in hand so the boon of the application is not availed by all students. In our country, nearly 35% students are using smart phones in the University level. The number is not high due to our poverty level. The positive thing is that the smart phone user is increasing since technology makes it low cost day by day.

III. LIMITATIONS OF THE CURRENT SYSTEM

The rapid changes and increasing complexity of today's world present new challenges and put new demands on our education system. There has been generally a growing awareness of the necessity to change and improve the preparation of students for productive functioning in the continually changing and highly demanding environment. In confronting this challenge it is necessary to consider the complexity of the education system itself and the multitude of problems that must be addressed. Students have to force to participate their class and make a good result. But they don't interest for the current system of teaching learning. Though students participate in the class but they don't listentheir lessons attentively.In the tradition system students have no opportunity to discuss any topics in their class time.

IV. HOW WE CAN OVERCOME IT?

The tools provide suitable learning platforms as they have applications tutors and learners may use in their academic activities. Mobile phones have a potential of improving the teaching and learning processes because they are cheaper than other ICTs used for the same purpose, continuous and situated learning support, decrease in training costs. Learning styles and preferences affect the way students approach any task and the way they function under different conditions and different learning environments. Learning styles such as reflectivity, field dependence or field-independence and mental self-government as well as preferences for interactive visual or auditory presentations or other ways of representing information have effects on student's academic performance. Students can easily ask any questions in our blog. They also group discussed in here. No restriction on learning without timetable from our site

V. RESEARCH CHALLENGES

Most of the students use non smart phone. So, it is difficult to ensure that, all students have a smart phone. Students may don't connect with internet all time. So they can't learn the proper solution of their problems and can't comment of that post instantly. Anyone can break the rules regulation of the blog and can arrange anarchy with other people of the blog .It will be difficult to maintain intimacy among the persons who will be participating in our blog.

Developing an appropriate technique of teaching and learning for the smart phone age.Design of technology to support a lifetime of learningprocess. Personal and private information and contents are difficult to hide from unauthorized person. Quite impossible to track the performance of the learners and proper use of this information.

VI. METHODOLOGY

Anyone who faces problems about any topics he/she can post his/her problems in the website. Every valid member will see this post and who able to solve these problems will discuss the problems and solutions. They also will able to live talk and live chat.

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To design this process we need a Smartphone, internet connection and a website. Using Smartphone the users will upload, download, talk and discuss to solve the problems.

Figure-1

We have used PHP, Java Script and CSS3 to develop website where the documents are shown and smart phone app. (browser) is needed to access the website.
Users will be able to upload/post their problems in the website those will be stored in the web server and those information will be shown in the website. They also will get their solution from that website solved by the experts.

We have choice such a technology for its reliability. Desktop or laptop are not portable but smart phone is portable and users can use it from anywhere any time which not possible by desktop or laptop.

VII. DISCUSSION

We have found from a survey on fifty students and five teachers about four weeks. From that survey we get this statistics chart.

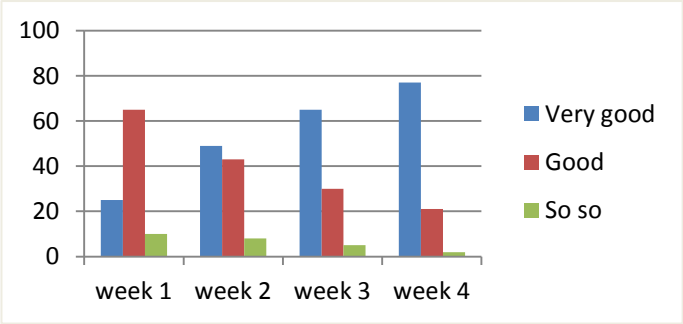

Figure-2

From figure-2 we can see learning capacity using smart phone based social network in increasing day by day. At first week about 22% users said the process is very good, at second it was about 45% and finally after four weeks we found the increasing rate grows up to about 80%.

We found from that survey the user's eagerness is highest for smart phone basedsocial network for teaching and learning.

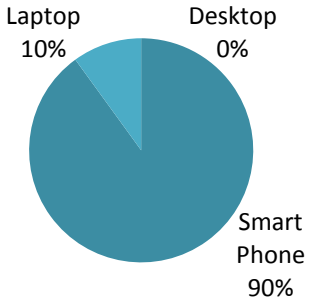

Figure-3

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90% users like smart phone based social network, 10% for laptop and 0% for desktop based for teaching and learning because of the portability of smart phone.
Users mostly like to use social network anytime from anywhere but desktop and laptop are not comfortable where smart phone is the best equipment for such demands.

Most of the students and teachers choice live chat, discussion, upload, download and post for solving their problems. Teachers upload their lecture on the web server and solve the problems for the students. Students also can group discussion for solving their problems easily.

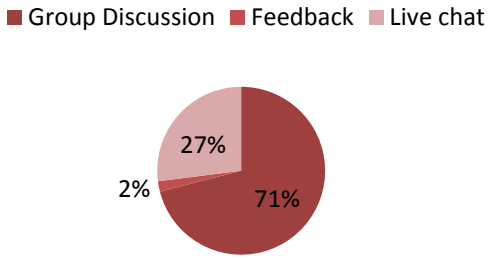

Figure-4

We have also found the 71% users want to discuss about their problems, 27% live chat or messaging and 2% want to get feedback.

VIII. CONCLUSION

The study found that smart phones were used for teaching and learning purposes among both teachers and students. Despite this generalization, the usage of smart phone applications for teaching and learning differed among respondents. All teachers and students mentioned to use text messages, live chat, video chat and posting while few mentioned to have used some advanced learning applications. Few did not use such applications as they were not supported by their phones, others did not know how to go about using them. Income hindered some from accessing useful learning applications as they were sold. Moreover, limited mobile storage spaces limited some from storing large multimedia contents suitable for teaching and learning. Furthermore, limited Web skills excluded the majority from using social network which are believed to enhance interactions and collaborations thus being suitable for teaching and learning. It is recommended that before buying smart phones people should try to study their specifications. Moreover, web content generators should consider mobile phones versions of their web contents as many people use their phones for accessing such contents. Smart phone operators should reduce internet service tariffs so that more can afford and use mobile internet services. Furthermore, web awareness among students and teachers should be raised as these tools are believed to be efficient in teaching and learning.

REFERENCES

[1] Utulu, C.S, (2012).Use of mobile phones for project based learning by undergraduate students of Nigerian private Universities. *International Journal of Education and Development usingInformation Communication and Technology*. Vol. 8. No. 1 (2008). pp.1-15.

[2] H. A. Latchman, Ch. Salzmann, Denis Gillet, HichamBouzekri, (2009)Information Technology Enhanced Learning in Distance and Conventional Education.IEEE TRANSACTIONS ON EDUCATION, VOL. 42, NO. 4, november 1999

[3] Kolko, B. E., Rose, E. J., and Johnson, E. J. (2007). Communication as information-seeking: the case for mobile social software for developing regions. In WWW '07: Proceedings of the 16th international conference on World Wide Web, pages 863–872, New York, NY, USA. ACM.

[4] Ford, M. and Leinonen, T. (2006). Mobiled: A mobile tools and services platform for formal and informal learning. In mLearn 2006, the 5th International Conference on Mobile Learning.

[5] Caverly, D., Ward, A., &Caverly, M. (2009). Techtalk: mobile learning and access. *Journal of Developmental Education*, *33*(1), 38-39.

[6] P. Farley and M. Capp, "Mobile Web Services," *BT Technology Journal*, vol. 23, 2005, pp. 202-213.

[7] Q. Wang and R. Deters, "SOA's Last Mile Connecting Smartphones to the Service Cloud," *Cloud Computing, IEEE International Conference on*, 2009, pp. 80-87.

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[8] M. Tian, T. Voigt, T. Naumowicz, H. Ritter, and J. Schiller, "Performance considerations for mobile web services," *Computer Communications*, vol. 27, 2004, pp. 1097 - 1105.

[9] Liu, T.C., Wang, H. Y., Liang, J. K., Chan, T. W., Ko, H. W., & Yang, J. C. (2003). Wireless and mobile technologies to enhance teaching and learning. *Journal of Computer Assisted Learning*, 19, 3, 371-382.

[10] Ben Woodcock, Andrew Middleton , Anne Nortcliffe , "Considering the Smartphone Learner: an investigation into student interest in the use of personal technology to enhance their learning"Student Engagement and Experience Journal Volume1, Issue 1 ISSN (online) 2047-9476

[11] El-Hussein, M. O. M. and Cronje, J. C. (2010) Defining Mobile Learning in the Higher Education Landscape. *Educational Technology & Society*, 13 (3), 12–21.

[12] Herrington, A. (2009) Using a smartphone to create digital teaching episodes as resources in adult education. In: Herrington, J., Herrington, A., Mantei, J., Olney, I. and Ferry, B. (eds.) *New technologies, new pedagogies: Mobile learning in higher education.* Wollongong: Faculty of Education, University of Wollongong. [Online] Last accessed 28 September 2011.

[13] Nortcliffe, A., Middleton, A. and Woodcock, B. (2011) Evaluating the use of audio smartphone apps for higher education learning. *Audio Engineering Society 130th Conference*, May 2011, London, UK.

[14] Park, Y. and Chen, J.V. (2007) Acceptance and adoption of the innovative use of smartphone. *Industrial Management & Data Systems*, 107(9), 1349-1365.

[15] Kamal K. Hingorani,Donald Woodard,NasrinAskari-Danesh .(2012)."EXPLORING HOW SMARTPHONES SUPPORTS STUDENTS' LIVES"-Issues in Information Systems Volume 13, Issue 2, pp. 33-40, 2012

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