ISSN: 3471-7102

USE OF SOCIAL MEDIA AMONG UNIVERSITY OF ZAMBIA LECTURERS IN TEACHING AND LEARNING.

(Conference ID: CFP/281/2017)

Authors: Edward C. Mwalimu, Felesia Mulauzi and Thabiso Mayaba Mwiinga

The University of Zambia, School of Education, Department of Library and Information Science, P.O. BOX 32379, Lusaka, Zambia

ABSTRACT

The role of social media in teaching and learning in higher learning institutions cannot be over-emphasized. Higher Education (HE) teaching practices have evolved over the last two decades, with more emphasis on student centred pedagogy. There is an increased expectation placed onto the role that technologies can play to harness effective learning. This is because student centred learning requires technology which facilitates active learning and deep interaction between students and their lecturers. One way in which lecturers can embracing the use of technology is through social media. However, there remains disconnect between the ambition for interactive learning through technology and the realities of the practice. The aim of this study was to investigate whether or not University of Zambia Lecturers use social media in teaching and learning. Specifically, the study investigated the extent to which social media platforms are being used by UNZA lecturers as teaching and learning tools, the preferred social media platforms for teaching and learning, the ICT knowledge levels and skills of UNZA lecturers in using social media platforms for teaching and learning, perceived benefits of using social media in teaching and learning, and challenges faced by UNZA Lecturers in using social media for teaching and learning. The study employed qualitative method. Thirty lecturers from the school of Education at the University of Zambia were purposively selected to take part in the study. Data was collected through a semi structured interview guide and focus group discussions. Results revealed that Lecturers especially the younger ones were in the forefront of using social media platforms for teaching and learning purposes. Further the results indicated that the most preferred social media for regular instruction were YouTube, Slideshare, Wikis, Blogs, LinkedIn, Facebook, and Podcasts and if appropriately implemented, these technologies can be a catalysts for learner-centred approach to teaching, social presence, collaborative learning, reduced cost, interactive, global reach, replicability and searchability were the main benefits the study revealed. The study also revealed that most of lecturers were competent enough to use social media for teaching and learning purposes while a few indicated that they required some of training. Challenges faced include, cost, inaccessible Wi-Fi, insufficient computers, privacy, time constraint, technophobia and miscommunication were the main challenges the study revealed. In view of the above the revelations, the study recommended that for lecturers to fully utilize social media for teaching and learning the University should invest in the much-needed ICT infrastructure which includes computer labs in schools, improved internet connectivity and acquaint all lecturers on the benefits of using social media for teaching and learning. Further lecturers are encouraged to assist learners to make effective use of these social media to build their knowledge base.

Keywords: Social media, e-learning, University of Zambia, Facebook, Twitter, Blogs, Teaching, Learning.

ISSN: 3471-7102

1. INTRODUCTION

The emergency of Information and Communications Technologies (ICTs) has fundamentally impacted on all spheres of life. ICTs have become indispensable in modern day life. In this regard, higher learning institutions both public and private have adopted ICTs in their teaching and learning. It is therefore necessary for lecturers to start embracing the use of social media in teaching and learning so as to prepare the learners for the ICT dominated labour market.

What then is social media? According to Varinder and Kanwar (2012: 8), social media, refers to "all web based applications which allow for creation/exchange of user generated content and enable interaction between the users." Vankat (2008) adds that the term social media essentially covers a set of technologies comprising of interactive media that allow people to create, modify, and share information. Although there are different applications that make up social media, the general principles of social media remain the same, which is that of 'mass socialization,' this according to Selwyn (2011) entails harnessing the power of the collective actions of online user communities rather than individual users. Social media entails that the internet is no longer a one-way broadcast delivery system where the individual user downloads data, information and other resources produced by a relatively small number of content providers. Instead, the internet is now driven by the activities of its ordinary users as they are the generators of content. Social media applications are seen to be open rather than closed, bottom-up rather than top-down. Social media users go online to share and rate, mash-up and remix, friend and trend.

2. BACKGROUND TO THE STUDY

Amidst these technological developments, many higher education institutions- students and educators alike, now find themselves expected to catch up with this world of social media applications. It is for this reason that Social media applications have continuously raised the awareness of a number of researchers on the prospects of using these tools for educational purposes. According to Armstrong and Franklin (2008: 12):

There are two important reasons why Web 2.0 matters to universities. Students will increasingly be using Web 2.0 technologies in their social lives, at work and in previous study, and will begin to expect that their courses will make use of them too...and perhaps more importantly, because Web 2.0 provides a new set of powerful educational affordances.

However, the fact that students are using a technology is not really a reason per se to use it in their education, but as alluded to earlier, Web 2.0 is made up of several technologies which provide different capabilities. It is anticipated that some of these technologies will have a significant impact on how students engage with their education. In as much as there are still divided opinions over the advantages of using Web 2.0 in education. Bryant (2006) in Mcloughlin and Lee (2007) explains that Web 2.0 tools have potential to handle the diverse needs of today's students, by providing them with opportunities to collaborate and network in an online environment. It is for this reason that lecturers at The University of Zambia should embrace the social media as a way of enhancing teaching and learning and therefore be able to produce graduates who are well prepared for this ICT dominated labour market.

3. STATEMENT OF THE PROBLEM

As indicated in the introduction the emergency of Information and Communications Technologies (ICTs) has fundamentally impacted on all spheres of life. ICTs have become indispensable in modern day life.

ISSN: 3471-7102

In this regard, higher learning institutions both public and private have adopted ICTs in their teaching and learning. Researches have shown that Web 2.0 has ground breaking opportunities for higher education, for instance, in a research where Swain (2008) did a survey among the students at Kansas State University, he concluded that Web 2.0 has relevance for higher education. Furthermore, in an experimental study by Ullrich et al (2008), it was concluded that Web 2.0 applications offer significant advantages in learning. These studies show that Web 2.0 can indeed encourage students to actively participate in learning. However, at The University of Zambia, School of Education in particular has not conducted any research regarding lecturer's use of social media for teaching and learning purposes. It is therefore, necessary that a research was conducted to accurately explain the extent to which social media is being embraced in teaching and learning activities.

4. RESEARCH OBJECTIVES

The objectives of the study were to find out:

- i) The extent to which social media platforms are being used by UNZA Lecturers as teaching and learning tools,
- ii) The preferred social media platforms for teaching and learning,
- iii) The ICT knowledge levels and skills of UNZA lecturers in using social media platforms for teaching and learning,
- iv) The perceived benefits of using social media in teaching and learning,
- v) The establish challenges faced by UNZA Lecturers in using social media for teaching and learning.

5. THEORETICAL FRAMEWORK

The study was guided by the Technology Acceptance Model (TAM). The model was developed by Davis in 1989. TAM has been widely used by researchers to explain how people and organisations adopt technology. According to TAM individuals' behavioral intention to use an information technology is determined by two beliefs namely;

- i. perceived usefulness
- ii. perceived ease of use.

Perceived usefulness in this model entails the extent to which a person believes that using an information technology will enhance his or her job performance. Perceived ease of use on the other hand, entails the degree to which a person believes that using technology will be free of effort. In this study, perceived usefulness and perceived ease of use will determine an individual's level of acceptance of a technological change in an organisation.

In line with this model, if lecturers perceive that social media platforms will enhance their teaching and learning, they are more likely to embrace such media platforms for teaching and learning. In contrast, if the lecturers think that social media platforms do not enhance teaching and learning, they are not likely to embrace such media platforms and may even reject the change. Additionally, if lecturers perceive social media platforms will ease their teaching and learning compared to traditional pedagogy, they are more likely to adopt social media platforms; if they perceive that learner centred pedagogy is easier with social media platforms as compared to traditional pedagogy one, lecturers are likely to social media platforms for teaching and learning.

ISSN: 3471-7102

6. LITERATURE REVIEW

The World Wide Web has undergone a huge transformation from a tool for scientists to a worldwide source of information for billions of users. It has transitioned into a more social participatory stage called social media under which an information user becomes the provider of information by creating, organizing and sharing content (Anderson, 2007). Few people would fail to notice the recent emergence of social media, especially much-publicized applications such as Facebook, Twitter, YouTube and Wikipedia. Since being declared *Time Magazine*'s 'Person of the Year' at the end of 2006, social media have come to dominate the ways in which digital technology is now used around the world (Selwyn, 2011).

Further, proponents of Web technologies in education have long argued that these technologies supplement and upgrade the widely accepted traditional delivery of lessons to students. For example, with reference to traditional learning, Vygotsky (1980) argued that human beings learn best if there are some sorts of interaction through collaborative learning and group work so that students work together on a task.

In this social media era, the said interaction and collaboration in teaching and learning is now implemented virtually without worrying about time and space limitations or barriers. To this end, some educational researchers have coined the term Learning 2.0 in reference to "a spectrum of all pedagogical approaches that draw heavily upon Web 2.0 tools.

According to Jones (2015:93), social media technologies such as blogs and Twitter are no longer only used for leisure. Rather, over the years, these technologies have also become platforms for interacting and engaging with learners. In their recent study about the tweeting behaviour of undergraduate students in some universities in Singapore, Menkhoff et al. (2014) find that among other benefits, Twitter enables students to have "a voice, to be more engaged and to interact more freely with both their peers and the instructor via knowledge sharing and twitter discussions". This means that students who are expectantly captive in traditional approach to teaching, are increasingly offered an opportunity to provide prompt feedback to instructors, an element that Schroeder and Greenbowe (2009) and Jones (2015:93) say leads to the much treasured student-centred learning approach. Getting feedback from students is glorified by Menkhoff et al. (2014) as an important aspect through which an instructor can monitor if students have comprehended the course content taught in class thereby allowing the instructor to identify knowledge gaps and address them on the spot.

7. RESEARCH METHODOLOY

The research design employed was the qualitative method in which a sample of thirty lecturers of thirty lecturers from the school of Education at the University of Zambia were purposively selected to take part in the study. Data was collected through a semi structured interview guide and focus group discussions.

8. FINDINGS AND DISCUSSION

Extent to which social media platforms are being used by UNZA Lecturers as teaching and learning tools

The study revealed that Lecturers especially the younger ones were in the forefront of using social media platforms for teaching and learning purposes. They indicated that social media provides them with the ability to break the limitation that students face in the face-to-face learning, enables innovative and

ISSN: 3471-7102

collaborative interactions. According to Talabi and Akinpelu (2011) lecturers and students use social media mainly for chatting and educational purposes and the greatest problem faced by the by lecturers and students in their use of social media are breakdown of networks and high cost. This implies that lecturers are willing to use social media for teaching and learning purposes if the necessary infrastructure is put in place.

Preferred social media platforms for teaching and learning

Results showed that the social media most preferred social media platforms were for regular instruction were YouTube, Slideshare, Wikis, Blogs, LinkedIn, Facebook, and Podcasts. Results also indicate that instructional purposes rank highest amongst why students use social media in classroom. The finding are in tandem with previous studies; for example, Moran et al. (2011) found that Facebook, YouTube, Twitter, Myspace, LinkedIn, Flickr, Slideshare, blogs, wikis, and podcasts are widely used in higher education. YouTube and Facebook were also the most frequently cited when lecturers reported their uses of social media in their teaching practice. The study further, revealed that lecturers believed social media sites offer value in teaching. They reported that videos, podcasts, and wikis are valuable tools for teaching. This was also observed by (Kabilan et al., 2010). Who identified Facebook as a potentially valuable resource for supporting student communication and collaboration with lecturers. Therefore, students have widely adopted its use Further, the younger lecturers believe that social media is easy to use and saves time and money especially for online courses. However, the results of this study differ from those of Ajjan and Hartshorne (2008), who found that while some faculty members believe Web 2.0 technologies could improve students' learning, their interaction with faculty and their peers, writing abilities, and satisfaction with the course, few instructors actually choose to use them in the classroom. Moreover, lecturers use social media in their regular instruction at a moderate level. Lecturers who wish to have the highest performing technology available and are eager for new solutions are labeled innovators (Rogers, 2003; Tantaphalin, 2010). The result is similar to the Sshaped adopter distribution, which rises slowly at first, whenever there are only a few adopters in each time period. Then, the innovation may ultimately be rejected (Rogers, 2003). The results of this research provide foundational data to guide instructional designers and lecturers to design courses that implement the use of social media, especially in regular instruction. This instructional model can help learners achieve their learning objectives. Therefore, instructors should be encouraged to use social media in their regular instruction as an effective tool for 21st century learning.

ICT knowledge levels and skills of UNZA lecturers in using social media platforms for teaching and learning

The results indicated that most of the lecturers were competent in the use of social media for teaching and learning purposes. They also stated that the use of social media had increased their creativity in teaching and that they had more time to interact with their students and this in itself encouraged students to participate more in the course. When asked if they had some prior training in the use of social media for teaching and learning purpose, they indicated that they were using social media for teaching and learning purposes out of personal interest and some indicated that they had to take some form of computer training even though it was not a must that they should do the training in order for them to able to teach. Others indicated that they were competent enough to use social media for teaching and learning purposes, however, lack of the necessary ICT infrastructure inhibits them from using such technologies. The older lecturers indicated that there was need for them to undergo some training if they were to make use of social media for teaching and learning purposes as they had no skills to use these technologies. This

ISSN: 3471-7102

conforms to the study conducted by Alazam et al. (2013) who identified a close relationship between having technology usage skills and level of technology integration in classroom. Similarly, other studies indicated that better technology integration into the classroom is dependent on users' level of knowledge and technological skills (Buntat, 2010; Paryono & Quito, 2010; Saud et al., 2010; Sukri, 2010). Further, Alazam et al. (2013) revealed that teachers' lack of technological skills was due to limited provision of pre-service and in-service training opportunities on the effective use of technology in the classroom. The lack ICT infrastructure is in line with what other studies have found, for example, Similarly, Al-Senaidi, Lin and Poirot (2009) indicated that the lack of equipment, institutional support, disbelief in ICT benefits, and lack of time, are some of the factors that cause barriers to technology integration. While Shohel and Kirkwood (2012) pointed out that resistance to technology adoption can be attributed to risk perception and uncertainty, which can limit teachers' ability to make full evaluations of technology integration (Howard, 2013). Within some faculty, lack of time commitment contributed to poor integration of technology into teaching (Amanortsu, Dzandu, & Asabere, 2014).

Perceived benefits of using social media in teaching and learning

Results revealed that if appropriately implemented, social media through the use of platforms such as Facebook, YouTube, Twitter and Blogs can be a catalysts for learner-centred approach to teaching. According to one"...both students and learners can interact especially on topics that were not clear in class...because they engage in a discussion, students who understood better than others can help clarify and even the lecturers can join in the discussion..." Thus, the importance of learner-centred approach in this era cannot be overemphasized. Learner-centred approach keeps learners engaged thereby ensuring effective learning, participation and knowledge retention. It has further been observed that there is a paradigm shift in pedagogical practice in universities world over as students across a wide variety of disciplines to make use of social media (Lepi, 2014). According to Aviram, Romen, Somek, Winer & Sarid, (2008) traditional pedagogical approach is no longer meeting the needs to prepare young learners to function effectively in today's ICT dominated labour market.

Secondly, the findings of the study revealed that social media offers tools that promote social presence, create a more interactive learning environment and foster collaborative study. For instance, it was explained by one of the participants that ..." you can build credible social presence on social media ...within the same blogs or wikis, there is provision for group chats which foster collaborative learning because students tend to form groups..."

The study further revealed that social media is an inexpensive means of disseminating huge amounts of information. This is evident from the response from one of the participant: "...you can give out large amounts of information to learners without incurring huge costs as compared to traditional environment where printing, paper and toner is required..." According to Benson, Filippaios and Morgan (2010) online social media has become increasingly popular in recent years providing a different and user friendly way to provide and share information. It is for this reason that it has become necessary to stress the need and raise the awareness of lecturers in the use of social media to enhance the teaching and learning processes. As stated by Dewing (2010), social media can be used at a reduced cost to provide easy and rapid means of generating, accessing, storing and disseminating, transmitting and communicating huge amounts of information. Another participant pointed out as follows: "...social media connects you to like-minded people and opportunities which one can hardly access without it...jobs, expertise, news and the like..." It can be deduced from this finding that social media is a powerful tool to not only connect people but also

ISSN: 3471-7102

opportunities like employment and expertise. Social - networking sites offer learners and teachers the opportunity to connect with other students and educators and even employers and consultancy.

Social media was also seen to be an interactive tool that can provide teachers and learners instant feedback. For instance, one of the participants explained that: ... using these technologies, lecturers share and discuss course materials with their students, allowing the lecturer to get feedback from the students on the course and the challenges students encounter in the course..." Furthermore, one of the participants added as follows: "You can receive feedback with social media instantly...it does not matter where you are and the time as long as you are connected...you can communicate or receive feedback..." stated one of the participants. This implies that social media is not only interactive but also global reach. Explaining on replicability and searchability of content, another participant added that ... you can share, copy or search for content online with ease..." The findings affirms Dewing's (2010) observations that special attributes of social media include persistence (a great deal of content posted on social media sites may remain there permanently by default); replicability (content can be copied and shared); and searchability (content can be found easily using online search tools); accessibility or global reach (social media can be used anywhere, at any time, where an Internet connection is available (Dewing, 2010), immediacy (provide instantaneous transmission of information to and from individuals or organizations) interactivity (effective two-way communication technologies); and reduced cost (provide easy, inexpensive and rapid means of generating, accessing, storing, disseminating, transmitting and communicating huge amounts of information).

Challenges faced by UNZA Lecturers in using social media for teaching and learning

The findings of the study revealed a number of challenges associated with use of social media for teaching and learning. One of the challenges include cost. One of the participant described this challenge as follows: "The bandwidth at UNZA is slow resulting in poor Internet connectivity...if one has bundles on their mobile phones, blousing becomes faster. However the cost of Internet data bundles high..." Many students cannot afford Internet connectivity as they do not earn an income. They rely on stipend given by government to survive.

Related to the above challenge is the problem of inaccessible Wi-Fi. One of the participants stated: "For members of staff, it is totally impossible to have Wi-Fi because it is only restricted to the fourth floor...There is a provision for students to access the edurom but connectivity is slow and is only found in few places within UNZA community..." This implies that majority of the people cannot access Wi-Fi thereby limiting individuals who may want to access Internet for educational purposes.

Another challenge that the study revealed is insufficient computers. For instance, one participant described the challenge of inadequate computers as follows: "The only few computers one can use to access Internet at UNZA are those in the library as the computers in the only so called "computer laboratory" are normally used for lessons...lecturers even book the laboratory in advance...So you find a que such that you cannot go there to conduct educational research...There are very few computers in the library working, about 20 only...UNZA has above 10, 000 regular students...how can we all share 20 computers? The computers are always filled up all the time..." Another participant had this to say: "In as much as UNZA has a computer laboratory, it is poorly equipped. I take 60 students there for practical computing lessons...with only 30 computers working...each computer has to be shared among three students, making even lessons

ISSN: 3471-7102

difficulty...so I encourage students with personal laptops to come with them to reduce on crowding one desk top".

The challenge of inadequate computers seem to be a serious one at UNZA. One can hardly engage into serious e-learning with shortage of computers.

The findings further revealed that lack of privacy is a major challenge for participants to use social media for teaching and learning. It was explained by one of the participant on this challenge that: "one of the biggest challenge with use of social media is that you can hardly hide anything...there is no privacy...you can hardly know who will access your information and for what purpose they will use it..." Similarly, Zaidieh (2012) posits that the social - networking sites such as Facebook and Twitter are open for anyone who wants to participate. According to Zaidieh, users express very powerful concerns about privacy of their personal information, but be less than vigilant about safeguarding it. Although a lot of the information individuals' supply on social - networking sites is elective, users are progressively more comfortable with displaying a great deal of personal information online. Therefore, one of the main concerns for users who register in these sites is how private their information is and who has access to the information and what is it used for. In addition, whose role is it - parent, student, educator and website developer to ensure an individual understands his right to privacy and exercises it accordingly. Jain (2015) supports this by stating that people with bad intentions may invade the personal privacy and cause problems, e.g. hackers, spies and people from outside the organization. Once information is out of the hands of the contributor, sometimes it is deleted from the contributor's account and becomes permanently unavailable because it is likely to have been accessed by other users who would still be keeping it. Thus, privacy is one of the stumbling blocks to use social networking in education.

Moreover, the study revealed that time constraint is another challenge participants experienced. One participants described time constraint as follows: "...I am on Facebook but only access it once in three months...it wastes much of my time...I am too busy with other assignments..." Another participant added: ... "social media is addictive...once you are on it, you can't easily stop it...each time you want to access more and more information and lose time without realizing it... The findings concur with those of Jain (2015) whose study revealed that social media can be of benefit but people are often busy with other assignments. In fact, it was observed by Zaidieh (2012) in his study that too much time spent online affect the health of individuals in terms of the way the genes operate within the human body, and weakens the immune and hormone levels, and function of arteries. In addition, it is also has an impact on mental health. The use of social networking in education can also cause lack of motivation towards learning and can be boring sitting in front of computer for a long time, especially if the scientific material presented is free of audio and visual effects that will attract learner towards learning.

Technophobia is yet another challenge that participants revealed in the study. One of the participant was honest enough to state as follows: ...Some of us are BBCs (meaning Born Before Computers)...learning computer and consequently Internet skills is challenging...I teach the traditional way as I don't want to complicate my life..." Indeed, some lecturers are afraid of using technology in teaching and learning. Neither are they willing to learn computer and Internet skills. According to Rodgers (2009), "some do not believe in or are fearful of using online tools...the main problem is lack of interest, skills, knowledge or fear of change and fear with technology" Yet, the world keeps changing and technology is supposed to be the way to go.

ISSN: 3471-7102

Similar to the findings of Zaidieh (2012), miscommunication in this study was found to be one of the challenges in use of social media for teaching and learning. For instance, one participant explained: "Some students find it difficult to get information communicated online...they want you to keep explain and explain on the same thing several times..." Zaidieh (2012) made similar observations in his study that elearning does not afford the student with the same opportunities of explanation and clarification that occur in face—to-face interaction. Learners face some difficulty through social networking in expressing their views and ideas in writing, as many learners prefer to express their ideas orally which is the approach they have used for many years through their study. E-education users need to acquire writing skills to express their ideas and opinions freely. Face to face allows individuals to perceive physical clues like tone, inflection, body language, in an online environment, these are lacking.

CONCLUSION

It can be concluded that liberalization of the Internet has increased the usage of all sort of social media by lecturers and students, and the wealth of knowledge that can be disseminated using these platforms cannot be overemphasized. Therefore it is necessary to include this media into teaching and learning. It is also advantageous for educators to captivate the attention of their learners by using social media that the learners are familiar with in order for the learners to remain focused on the course.

RECOMMENDATIONS

In view of the above research findings, the following recommendations can be considered for implementation:

- a) Build capacity among lecturers to enable them use social media for teaching and learning purposes at the University of Zambia.
- b) Provide the needed ICTs infrastructure to enable lecturers use social media for teaching and learning purposes.

ISSN: 3471-7102

REFERENCES

- [1] Anderson, T. (2007). Toward a theory of online learning. In T. Anderson & F. Elloumi (Eds), Theory and practice of online learning (pp.33-60). Athabasca, AB: Athabasca University. http://cde.athabascau.ca/online_book/pdf/TPOL_chp02.pdf [viewed 28 Apr 2015].
- [2] Armstrong, J. and Franklin, T. (2008). A review of current and developing international practice in the use of social networking (Web 2.0) in higher education. Retrieved from http://www.franklinconsulting.co.uk Accessed on 03/03/2012
- [3] Bryant, T. (2006). Social software in academia, EDUCAUSE Quarterly, 29(2), 61-64. http://www.educause.edu/ir/library/pdf/EQM0627.pdf [viewed 10 Jan 2015].
- [4] Dewing, M. (2010). Social media: An introduction (In brief). Available at: http://www.lop.parl.gc.ca/content/lop/researchpublications/2010-03-e.pdf (Accessed on 15th June, 2016).
- [5] Jain, P. (2015). Impact of social media on information professionals: prospects and challenges. In: Adeyinka, T. (ed). *Social media strategies for dynamic library service development*. Nigeria: IGI Global.
- [6] Jones, A. (2015). How Twitter saved my literature class: a case study with discussion. In C. Wankel, M. Marovich, K. Miller, & J. Stanaityte (Eds.), Teaching Arts and Science with the New Social Media (pp. 91–105). Bingley: Emerald Group Publishing.
- [7] McLoughlin, C. & Lee, M.J.W. (2007). Listen and learn: A systematic review of the evidence that podcasting supports learning in higher education. In C. Montgomerie & J. Seale (Eds), Proceedings of World Conference on Educational Multimedia, Hypermedia and Telecommunications 2017 (pp. 16691677). Chesapeake, VA: AACE.
- [8] Menkhoff, T., Chay, Y. W., Bengtsson, M.L., Woodard, C. J., & Gan, B. (2014). Incorporating microblogging ("tweeting") in higher education: lessons learnt in a Knowledge Management Course. Computers in Human Behavior. http://www.sciencedirect.com/science/article/pii/S074756321400681. Accessed 4 Dec 2015
- [9] Schroeder, J., & Greenbowe, T. J. (2009). The chemistry of Facebook: using social networking to create an online community for the organic chemistry laboratory. Innovate: Journal of Online Education, 5(4), 1–7.
- [10] Selwyn, N. (2007). Web 2.0 applications as alternative environments for informal learning: A critical review. Paper for OCEDKERIS expert meeting, Session 6 alternative learning environments in practice: using ICT to change impact and outcomes.
- [11] Ullrich, C., Borau, K., Luo, H., Tan, X., Shen, L. and Shen, R. (2008) Why Web 2.0 is good for Learning and for Research: Principles and Prototypes. Available at 69 http://www.conference.org/www2008/papers/pdf/p705-ullrichA.pdf Accessed on 22nd March 2012
- [12] Varinder, T. and Kanwar, P. (2012). Understanding Social Media. Available at www.bookboon.com, Accessed on 02/04/2012
- [13] Venkat S. (2011). Web 2.0/3.0: Emerging Widgets and the Next Generation of Higher Education Applications. Available at www.niit.com, Accessed on 02/04/2012
- [14] Vygotsky, L. S. (1980). Mind in society: the development of higher psychological processes. Cambridge: Harvard University Press
- [15] Zaidieh, A.J.Y. (2012). The Use of Social Networking in Education: Challenges and Opportunities. *World of Computer Science and Information Technology Journal (WCSIT)*, 2(1): 18 21.