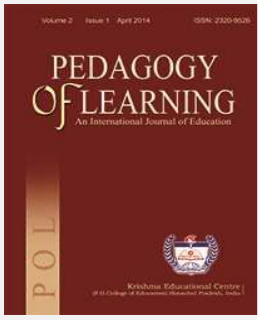
Pedagogy of Learning, Vol. 4 (2) April 2018, 01-08

PEDAGOGY OF LEARNING (POL)
International Refereed/Peer Reviewed
Journal of Education
E-ISSN: 2395-7344, P-ISSN: 2320-9526
Abstracted and indexed in: Google Scholar, Research Bib, International Scientific Indexing (ISI), Scientific Indexing Services (SIS), WorldCat, Cite Factor, Impact Factor: 0.787(GIF)
Website: http://pedagogyoflearning.com



Familiarity and Adoption of Web 2.0 Technologies in Higher Education

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Article History:
Received: 10 February 2018, Received in revised form: 14 March 2018
Accepted: 17 April 2018, Published online: 21 April 2018

Abstract
The term of information and communication technology (ICT) in the field of education is no more surprise. Integrated role of information technology and communication technology enhances the pedagogical practices and learning outcome. The classroom enriched with diverse technologies leads to flexible learning environment. The purpose of the present study is to explore various media and its usage. The objective of the study is to identify the level of familiarity with social-media of student. To compare the level of adoption of social media in learning by students. Descriptive research design was followed for this study. A sample of 310 students from Ravenshaw University Cuttack was selected purposively. A questionnaire on Web 2. 0 technologies was used for data collection; and data were analyzed through percentage. The findings of the study show that the majority of the students are highly aware of some technologies of Web2.0 but adoption of those technologies for learning is still in nascent stage. The familiarity and adaptation levels of boys are comparatively higher than girls. The findings of the study have both theoretical as well as practical implication for academician, learner, teacher educator, policy maker to improve the quality practices in higher education.
Keywords: Web 2.0 Technology, Adoption, Higher Education

I. INTRODUCTION

The potentialities of any technology can realize by accepting its possibilities. There is an immense potential of technology to integrate in various fields of human needs. It's an individual who can extract the power of technology to enhance his/her ability to perform any activity. Information and communication technology is one of the most needed approaches in education. Information and communication technology, which offers a diverse range of tools and techniques to facilitate, to support, to enhance, to upgrade and to disseminate an information for the cause of learning. For the dissemination of information to create a knowledgeable society awareness and adoption of evolving technology is utmost necessary to become a digital citizen.

From the very beginning of the 21st century the advancement of World Wide Web, the learning environment is enriched. Web2.0 is refer to new generation web technology which allow the user to participate by contributing content without knowing much about the technology. The term Web2.0 is attributed to Tim O' Reilly (2005). The most important characteristics feature of web2.0 is connect the people through a web of social network. In this social web platform a user can collaborate, share, edit, like, tag, follow and can maintain his website. Examples of web2.0 technologies includes, wikis, which is allows to collaborative editing, such as Wikipedia (Peters and Slotta, 2010). There are many wikis tools available open and free. Blog is a online journal which is regularly updated by the individual or group of people. It's a webpage where an individual share his/her interest, experience, passion and allow the other people to like, comment, share or subscribe the page. Posts in blogs are display in chorological order. Social networking site are dedicated website or application where a network of social interaction between the group and subgroup of people. RSS is enable website and users subscribe the page so that the notification of content updating automatically notify to the user via aggregator. Instant messaging is internet based interaction with one to one or one to many users. Podcast and Vodcast are media sharing website or application where user upload and share their content in audio video form. Social bookmarking is also known as Folksonomies that allows social tagging. Users can categories of their choice, and have the option of sharing their repository of keywords with other users (Alexander, 2006).

Now, the classroom teaching and learning practices crossing the boundary of four walls. But, it is important to know whether students are interested to participate in the classroom while using web2.0 tools versus paper based method (Granito, 2012). Peters and Slotta, (2010) believe that implication of web2.0 technologies support new form of curriculum and assessment in classroom. According to Majhi and Moharana(2011) Web 2.0 tools and techniques have strong features and potentials to spread out and reshape the entire process of teaching and learning. The teachers and students are getting connected to each other, anytime and anywhere for learning. But the major point is about the teacher and students' may not always be familiar with tools (McLoughlin and Alam, 2014) can affect their cognitive ability and learning process. Smith and Dobson (2014) suggested web2.0 technologies can be used to design new learning opportunities for the future. According to Nicholas and Rowlands (2011) social media become an important complementary channel for disseminating and discovering research. Atkins, Koroluk and Stranach (2016) pointed out that social media can be used for teaching and learning center to share resources between and

amongst one another. Lee (2011) pointed out that Web2.0 tools provide learners with powerful means to create their own learning materials and personal learning environments. Forsyth (2014) mentioned the risk and benefits of Web2.0 technologies while expanding the classroom walls is one of the major risk related with students knowledge, skills and attitudes because integrating technology in the routine traditional classroom may interrupt their learning process.

Rationale of the Study

Information and communication technology is one of the most emerging technologies in education. Multiple approaches of technology like hardware approach, software approach and system approach are the support for education to improve the realities of quality of education. Many research studies have been conducted on Web2.0 technologies and its possible integration in different levels of education. Atkins, Koroluk and Stranach (2017) concluded from their exploratory survey that social media provide a learning platform to engage a wide range of individual and groups including faculty, staff and the general public.

Eze (2016) conducted a study on awareness and use of Web2.0 tools by students and found that they are quite familiar with Social networking, Instant messaging blog and Wikis. Facebook, Youtube and Wikis are used most frequently while they are not familiar with tools like RSS Feeds, Social bookmarking and Podcast. Pardia (2016) found that college students are aware about using Web2.0 tools for learning. The author also suggested that implementation of web2.0 tools would be beneficial for the students for creating a more inclusive learning environment. In his typological analysis of Web2.0 learning technologies (Bower, 2015) found wide arrays of web2.0 learning technologies, their pedagogical uses with description, but it is yet to be harnessed by the learner and learning designers.

Hamid et.al., (2016) suggested from their study that students found many positive thing from using social networking and its use in classroom teaching and learning. Baro and Ikolo et.al (2015) investigated the level of awareness and use of web2.0 tools and found that students learnt the use of web2.0 tools through self practice followed by friends. McLoughlin and Alam (2014) suggested that Web2.0 tools can enable engaged, self regulated learning in real world activities to learn key concepts. Rahimi et.al., (2014) proposed a conceptual framework to assist teachers to design Web2.0 based learning activities, which can support the students for their personal learning to complete their assignments and learning projects.

Roblyer and McDaniel et.al (2010) pointed out that students are more likely to use Face book and other similar technologies than faculty. While faculty members are like to use traditional technology. Light (2010) explained the needs of web2.0 tools as a part of daily classroom practice. Majhi and Maharana (2011) compared the familiarity level of Web2.0 technologies in two universities and found that there is no significant difference in usage of Web2.0 tools. Bhatt, Chandran and Denick (2009) suggested in their study that faculty and student need to realize the potential of web2.0 applications in keeping up-to date with new information. Kumar (2009) found that student did not perceive Social networking tools to be useful for teaching and learning, but on-campus courses and integration of tools such as online discussions or blog, podcast of classroom lecture, collaborative document sharing (google docs) in classroom practices greatly influence their perception.

From the above related studies on familiarity, awareness and uses of Web2.0 technologies in education (Majhi and Maharana, 2011; Roblyer and McDaniel et.al 2010; Paradia 2016 and Eze 2016) found that students and teachers are quite aware and familiar of Web technologies. Most of the studies suggested that potentiality of Web2.0 technologies in teaching-learning can help both teacher and students. While, the potential use and needs of Web2.0 technology in education is realized by (Light, 2010; Rahimi , 2014; Bower, 2015; McLoughlin and Alam, 2014 and Atkins, Koroluk and Stranach, 2016) and proposed conceptual design of pedagogy and Web2.0 in classroom practice. The perception towards use of Web2.0 (Kumar, 2009; Baro and Ikolo et.al (2015) are quite positive and the studies suggested integration of technology in the classroom will enhance the user attitude towards online learning.

From the above findings, there is an immense potential of Web2.0 technology in education, but the most important point is, the two participants of education must be familiar about the possible usage of those technologies. The present study focused to explore the level of awareness and adoption of Web2.0 technologies in higher education.

Objectives of the Study

1. To identify the awareness levels of students on Web2.0 technologies.
2. To study about the adoption of Web2.0 technologies.
3. To compare the familiarity levels of students with reference to their gender on Web2.0 technologies

Research Questions

1. Which Web2.0 tool (s) is most frequently adopted by the students and why?
2. What purpose do students and teachers use web2.0 tools for?
3. What are the reasons for high and less usage of Web2.0 tools?

Delimitation of the Study

The present study is delimited to 310, post graduate students (155 boys and 155 girls stream) of Ravenshaw University, Cuttack District only.

II. RESEARCH METHODOLOGY

In the present study, a close ended questionnaire was administered to post graduate students Ravenshaw University, Cuttack, by adopting the purposive sampling method. The sample consists of 310 students and obtained data was analyzed with appropriate statistical techniques and findings of the study are generalized.

III. MAJOR FINDINGS OF THE STUDY

Web2.0 tools and techniques have immense potential which can play a significant role in changing the nature of teaching and learning. Extending from conventional classroom to online classroom, Web2.0 tools becomes an urgent need for members of learning communities to enhance the process of communication. The web technologies not only providing the information on a finger touch but also assisting the student to learn anytime and anyplace. The investigator therefore collected the information from the university students to

know their level of familiarity and adoption of Web2.0 technologies and following points have been found:

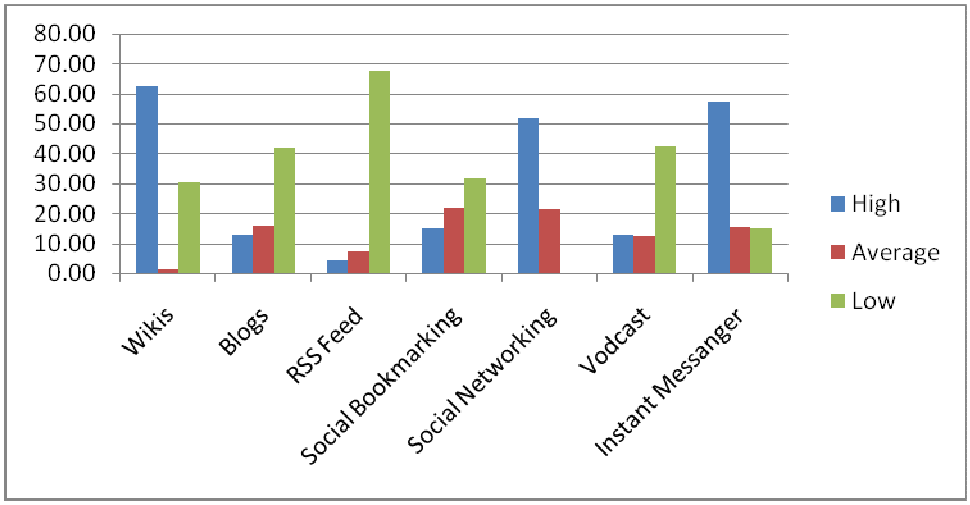

Chart 1.0: Familiarity levels of students on Web2.0

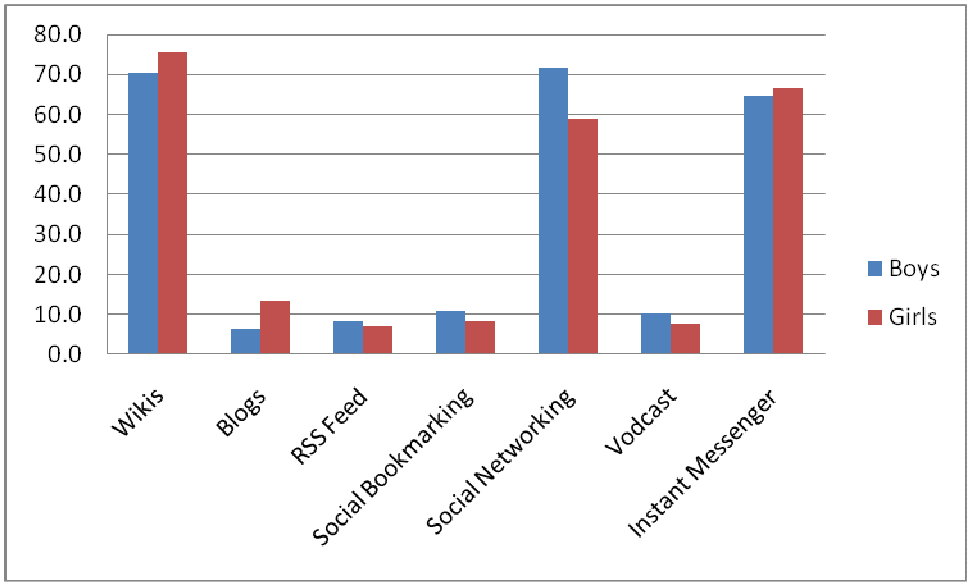

Chart1.1: Familiarity levels of boys and girls on Web2.0

a) From the above chart 1.0, respondents are highly familiar with Wikis, Social Networking and Instant Messenger while less familiar with blog, RSS feed, and Social bookmaking. In chart 1.1 indicates boys are comparatively more familiar than girls. This means web2.0 technologies is highly adapted by boys than girls, the reason cited by girls were unavailability of devices and lack of awareness.

b) When respondent were asked which hardware device they use to access the web2.0 tools, majority of them said mobile phone(53%), laptop(23%) then tablet(13%) and institutional computer lab (7%) respectively. For internet connectivity (broadly WiFi

network) is provided by the institution and mobile connectivity. But very less number of student are aware of internet security.

c) The respondent indicated that they are well aware about Web2.0 technologies like Wikis 193(62.26%), Instant messenger 178(57.2%) and Social Networking 161(51.94%) and when asked about the reason for most aware and usage, it is because of high degree of educational value and personal use.

d) The respondents in present study are very less aware about RSS feed 210(67.74%), 132(42.58%), blog 130(41.94%) and Social bookmarking 120(38.71%) and when asked about reason for less awareness, they indicates less interest, never heard such technology and insignificant for learning.

e) Vodcast,132(42.58%) less familiar with the term although most of the respondent using YouTube for entertainment like listening and downloading song and music, watching and sharing video like short film, news, lecture, movie trailer. They even want their teachers lecture should be made available so they can access again in case they missed it. They realize about the potential of audio and video multimedia in education.

f) The result of the study reveals that overall familiarity about technology is satisfactory and it is encouraging to note that respondent are highly familiar with Facebook, instagram, WhatsApp and Wikipedia. They are well adopted with these technology and using daily specially for be connected with their friends, relatives and teachers. While many respondents personally do not have smart phone nor laptop or computer, so they are less adopted.

g) Moreover they use these technologies for personal learning as well as academic purpose. It is pleasing to note that they found Wikipedia as best online resources for personal learning and usage frequency is high before every examination. It is also found those students are developing their assignment by using various online and offline tools.

h) The results indicates the main purpose of educational usage of web2.0 tools is accessing learning resources and sharing among peers.

i) Many respondents agreed that they know about Web2.0 technologies from their friends, news updates and elder siblings and mainly they use for entertainment like communicating with friends, teachers, relatives, playing online games, listening music and watching video.

j) When the Web2.0 tools are introduced by explaining the features and its look alike, most of students responded they know and using it, for example Microblog, blog and Vodcast. This shows respondents as less familiar with technical term but high with generic term.

k) But the respondents are less aware about other technologies like social bookmark and RSS feed. It is because they do not found any significance in their day today life. While some respondent were completely unaware of many tools and the reason is

unavailability of technology, lack of knowledge, lack of interest and lack of proper guidance.

IV. CONCLUSION

The popularity and changing nature of web2.0 technologies and its potential is well appreciated in the field of education. Moreover, recent technologies offer interactive features to the learner for creation, communication and collaboration. Thus the possibilities of integrating technology in teacher education along with several dimensions can create many opportunities for future teacher. But awareness about certain web 2.0 is very high while other has very less and thus creates a big gap between the emerging technologies. Adoption of new technology specifically for educational purpose like empowering the teacher educator and pupil teacher will help to achieve the quality of education. Therefore, integration of technology in teacher education may be advantage to develop the competency of a teacher by blending the content and pedagogy with technology. It will also develop the sense of digital citizen to create a sustainable and knowledge based society.

REFERENCES

Alexander, B. (2006). Web 2.0: A new wave of innovation for teaching and learning? *EDUCAUSE Review, 41*(2), 32–44.

Atkins,B., Koroluk, J., and Stranach, M. (2017). Canadian teaching and learning centers on Facebook and Twitter : An Exploration through social media. *TechTrend. 61(3), 253-262.* Retrieved from https://link.springer.com/article/10.1007/s11528-016-0144-2

Baro, E.E., Ikolo, V., Atanda, L.A. (2015) Awareness and use of Web2.0 tools by LIS Students in Delta State University, Abraka. *Global Journal of Academic Librarianship, 1*(1), 27-42.

Bhatt, J., Chandra, S., and Denick, D. (2009). *Using web 2.0 applications as information awareness tools for science and engineering faculty, students in academic institution.* Retrieved from https://idea.library.drexel.edu/ islandora/object /idea%3A2974.

Conole, G. and Alevizou, P. (2010). *A literature review of the use of Web 2.0 tools in Higher Education. A project report submitted to Higher Education Academy*. The Open University, Walton Hall. UK

Eze, M.E. (2016). Awareness and use of Web 2.0 tools by LIS Students at University of Nigeria, Nsukka, Enugu State, Nigeria. *Library, Philosophy and Practice.* Retrieved from http://digitalcommons.unl.edu/cgi/ viewcontent.cgi?article=3707 &context= libphilprac

Hamid, S.,Waycott, J., Kurnia, S., and Chnag, S.(2015). Understanding student perceptions of the benefits of online social networking use of teaching and learning. *Internet and Higher Education, 26*, 1-9. DOI http://dx.doi.org/10.1016/j.iheduc.2015.02.004

Light, D.(2010). *Integrating web2.0 tools in the classroom: changing the culture of learning.* Retrieved from https://files.eric.ed.gov/fulltext/ED543171.pdf.

Majhi, S. & Maharana, B. (2011). Familiarity of web2.0 and its application in learning: A case study of two Indian universities. *International Journal of Library and Information Science*. *3*(6). 120-129. Retrieved from http://www.academicjournals.org /journal/IJLIS/article-abstract/92FCB173105

McLoughlin, C. E., and Alam, S.L. (2014). A case study of Instructor Scaffolding Using Web2.0 tools to teach social informatics. *Journal of Information System Education. 25*(2), 126-135. Retrieved from http://jise.org/Volume25/n2/JISEv25n2p125.pdf

Pardia, S.A. (2016). *Understanding college students' readiness to use Web2.0 technologies in online Education.* Doctoral Thesis at Walden University. Retrieved from http://scholarworks.waldenu.edu/cgi/viewcontent.cgi?article=4164&context=dissertations.

Peters, V.L. and Slotta, J.D. (2010). Scaffolding knowledge communities in the classroom : new opportunities in the web2.0 era. In M.J. Jacobson and P. Reimann (Eds.), *Designs for Learning Environments of the Future: International Perspectives from the Learning Sciences*. DOI 10.1007/978-0-387-88279-6_8,

Rahimi, E., Berg, J.D., & Veen, M. (2014). A Pedagogical- driven framework for integrating web2.0 tools into educational practices and building personal learning environments. *Journal of Literacy and Technology, 15*(2), 54-79.

Roblyer, M. D., McDaniel, M.,Webb, M., Herman, J., and Witty, J.V. (2010). Findings on Face-book in higher education: A comparison of college faculty and student use and perception of social networking sites. *Internet and Higher Education.13*, 134-140.

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