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Frequency and Perceived Enjoyment of the Use of Web 2.0 Tools by Undergraduates of Two Universities in Nigeria

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ABSTRACT: *Many undergraduates in Nigerian universities are faced with problems of nervousness, apprehension and lack of confidence or ability in the use of Web 2.0 tools. Even when some of them have the skill, the ICT infrastructure may not be available, accessible, sustainable, affordable, modern or of top-notch quality. These factors may not allow them to use the tools frequently and/or enjoy using them. It is to this end that this study sets out to investigate how frequent and enjoyable undergraduates in the two first generation Nigerian universities under review are finding the use of Web 2.0 tools for academic activities.Descriptive survey research design was adopted for this study. Multi-stage sampling technique was used to select the sample size of 290 out of a population of 35,902. Data collected from 281 respondents who duly filled and returned copies of the structured questionnaire given out at the University of Ibadan and Obafemi Awolowo University were analysed with descriptive and inferential statistics. Findings revealed that the types of Web 2.0 tools that were regularly used by the students include Facebook, GoogleAD, Websites/Blogs, Email Tutorials, Twitter and YouTube. It could be inferred that the students perceived that enjoyment in the use of Web 2.0 tools lies in the fact that the actual process of using Web 2.0 tools is pleasurable, improves social networking, make Online/Internet chatting and learning exciting, satisfying and hence, enjoyable. There was a significant positive relationship ($r = .291$; $df = 280$; $p < 0.05$) between perceived enjoyment and use of Web 2.0 tools by the undergraduates. This implies that the higher the perceived enjoyment, the more they use Web 2.0 tools for academic activities. It is therefore recommended that students be exposed to a wider range of Web 2.0 tools for gainful learning experiences which may lead to good academic achievements. Provision of a very stable Internet connectivity is also advised for a faster, sustainable, more frequent and enjoyable use of the tools. Moreso, since perceived enjoyment is confirmed a factor in the use of the tools, it is suggested that state of the art ICT infrastructure be provided and the environment of the ICT Laboratories be made more conducive for a tireless, gainful, enjoyable and game-changing academic activities using the Web 2.0 tools.*

KEYWORDS: Perceived enjoyment, Web 2.0. tools, Undergraduates, Nigerian universities, Nigeria.

INTRODUCTION

The use of Information and Communication Technology (ICT) facilities by undergraduates in Nigerian universities should ordinarily be limitless as it has reduced to the barest minimum the stress and strain they pass through in their bid to source for and retrieve information to meet the challenges of learning, research, seminar presentations, assignment completion, community services, registration for admissions, payment of tuitions fees, sending and receiving e-mails and the likes. Higher education is approaching the point at which science and technology, particularly, plays a vital role in nearly all phases of the educational process (Achimugu, Oluwagbemi & Adeniran, 2010).

Rapid increase of portable ICT tools such as the iPad, mobile phones, slim desktop computers, tablets, laptops, palmtop, Internet Modems, Wi-Fi, Mi-Fi, and the likes have facilitated the frequent use of Web tools by students in universities, especially the undergraduates, to seek for information for various purposes which include online chatting, reading online newspapers, making online transactions, reading and listening to online news and watching entertaining videos, making online calls, group calls/discussions, video synchronizing/editing and reading, learning and researching with texts. With the rapid development of ICTs and the frequency of use, Web 2.0 tools have increasingly become readily available, giving access to variety of electronic resources. Web 2.0 tools include platforms such as MySpace, Flickr, Orkut, YouTube, blogs, bookmarking, Google Ad, E-mail tutorials, Scribd, Podcast, Twitter, Facebook, Instant messaging apps such as WhatsApp, Messenger, BBM, among others, which are available and frequently used for students' sundry purposes (Franklin & Van Harmelen, 2007).

Web 2.0 tools are defined as Internet tools that allow the user to go beyond just receiving information through the Web to interacting and creating content with others. In many cases, the terms “Web 2.0” and “social media” are interchangeable and are widely used to describe same concepts which relate to creating and belonging to online academic and/or social communities and sharing online information and resources (Rogers, 2009). However, they differ in the sense that while the term Web 2.0 refers to the actual applications available to Internet users, the term social media refers more broadly to the concepts of how these applications are used and the communities built around them, online. These tools and services can support much flexibility in the learning processes and allow for easy publication, sharing of ideas and reuse of the study content, adding commentaries and links to relevant resources in information environments that are managed by the teachers and learners themselves (Guntram, 2007).

Web 2.0 tools can be used to enhance teaching and collaboration among teachers and students as well as increase professional collaboration between educators. Khalid and Richardson (2013) described Web 2.0 as a term commonly associated with Web applications that facilitate interactive information sharing, interoperability, user-centred design and collaboration on the World Wide Web. The distributed nature of Web 2.0 tools means that undergraduates may have easier access to the expertise and research results of others, to authentic teaching and learning environments and

to distributed and varied audiences. The creation of an audience for learners can be motivational in a number of respects: as a means of providing an outlet for demonstrating their learning and as a mechanism for getting feedback (Franklin & Van Harmelen, 2007; Khalid & Richardson, 2013). The term Web 2.0 tool, which was introduced by Tim O'Reilly (O'Reilly, 2005), has emerged and gained popularity in universities. The explosive growth and the frequency of use of blogs, Wikis, Social Networking Sites (SNS) and other online communities has transformed the Web from static to a more interactive medium. It is the now interactive and inter-operational Web that is termed Web 2.0, an evolution or a graduation of the old static Web. Web 2.0 technologies have impacted undergraduates' online communication and daily tasks. The newspapers industry began to lose subscribers to news blogs; encyclopedia companies are changing the way they operate because of the online Wikipedia (Hendler, 2008). Students are now talking about and using Blogspot, Wordpress, Flickr, YouTube, Friendster, Facebook and the likes. This Web 2.0 phenomenon is also occurring in many countries as most of the undergraduate students nowadays have registered their own SNS account such as Friendster, Facebook and MySpace as well as blog account on blogspot.com and Wordpress.com. Students are now frequent user of YouTube to create or search, download and share video of learning and entertaining contents with anyone, anywhere - around the world; this is possible without the constraints of distance and cost (O'Reilly, 2005).

Web 2.0 tools are seen to hold great potential to transform classrooms into "interactive, participatory, adapting, living organisms of learning and generating content" (Rosen & Nelson, 2008). Recent contributions to the development of Web 2.0 tools have suggested that new learning environments are in line with the view of learning as knowledge creation. This view of learning claims that students' progress significantly more when working cooperatively and sharing ideas with others than when working in isolation. For example, frequent social interaction can lead to advanced cognitive development and promote higher academic achievement than individual learning activities (Brown, 2010).

It is a common knowledge that in recent years, Web 2.0 tools have become popular, particularly with university students. Web 2.0 tools have become part of the students' lives and have helped to build their connections with others of related interests, research and profession. Consequently, academic institutions have realised the importance of Web 2.0 and a growing number of academic communities are creating accounts and joining groups through these interactive and social sites (Al-Daihani, 2010). Similarly, numerous efforts have been made to understand the use of Web 2.0 in education and how it can elevate the quality of learning in institutions of higher learning (Shafique, Anwar & Bushra, 2010).

Salehe (2008) evaluated the potentials of Web 2.0 tools in enabling the process of sharing of teaching knowledge that is related to Computer Science in higher educational institutes and the results showed that wiki, blogs, pod and Really Simple Syndication (RSS) were useful for teaching and learning as well as facilitating sharing of teaching knowledge among the lecturers. An important noticeable development in the study of Sandars and Schroder (2007) is the frequent use of instant messaging, media sharing and social networking by young people, especially those

below 24years of age. The work also revealed that Web 2.0 tools offered new opportunities for learning to undergraduate and post-graduate medical students with an overall high awareness of a range of new tools for educational purposes. The study called for increased training on the specific use of more of such learning tools among the students.

Kumar (2010), however, established that although no studies were identified to have compared the use or benefit of any Web 2.0 tool over another across disciplines or for a particular field, the three most useful tools according to his findings were online forums or blogs; class capture in the form of video casts, audio podcasts or smart board capture as well as Google documents. His study also showed that undergraduates welcome teaching and learning experiences with the adoption of new technologies which add value to the existing practice thereby leading to the enhancement of the learning process which gratify all types of learners.

Davi, Frydenberg and Gulati (2007) also submit that the use of "blogs" has become popular among colleges because faculty members have integrated blogs into their courses to enhance class discussion. They concluded that liberal learning depends on students taking responsibility for their education while instructors in any discipline can use blogs to begin conversations about courses materials before and after classes and as such enhance active learning. They stated further that the idea behind blogging makes it an improvement for classroom use over the discussion groups because one can visit a blog occasionally to see if there is any new content posted by visitors to the blogs because of its "publish-subscribe" model in which the author publishes content and notify subscribers whenever new contents are posted. Blogging makes use of really simple syndication. The aim of using a blog according to Cooper and Boddington (2005) is to provide a way of promoting interactions between students in a relatively large students' class in particular so as to enable students to learn from insider.

Consequently, evidence from the students who use podcasts according to Edirisingha, Rizzi, Nie and Rothwell (2007) clearly showed that they immensely benefited from its usage and that the key objective for the frequent use of podcast among the undergraduate module was to improve the students' learning and study skills while data analysis also revealed that podcasts were successful in supporting students' preparation for assessed work as well as provision of significant advice on portfolio and presentations.

Furthermore, Radel (2011) opined that majority of the past research into the social networking sites and their uses actually suggested that the World Wide Web usage is increasing rapidly while higher institutions of learning are also following the trends and also working to develop and offer their students blended learning opportunities. He also confirmed that Web 2.0, 3.0 and beyond are the greatest opportunity in offering "environments of collective intelligence", where every user participates in the process of creating new knowledge. To him, Web 2.0 also established students' participation within social website, a change agent that propelled students' learning process and provide an in-depth evaluation of the online learning environment in order to develop the program to meet students' learning needs. However, it was concluded that the use of social sites such as

Facebook can significantly contribute to students' life-long learning outcomes while there must also be carefully defined needs and goals of participating in such online activities to avoid distractions. Meanwhile, the study of Leung and Kaiwahchu (2009) examined the use of Wiki in a group project among undergraduate students in Hong Kong and discovered that Wiki logs and discussion boards greatly assist in the learning process and also contribute to the learning community in higher education. However, the work also revealed that limited collaboration exists between the students in the course of using Wiki.

In contrast, Virkus and Bamigbola (2011) found that Web 2.0 is "allowing greater student independence and/or autonomy, greater collaboration and increased pedagogic efficiency". These authors studied Africa and Asia students of Erasmus Mundus Digital Library Learning (DILL) Master programme and found that Web 2.0 tools were perceived as means of creating and reading profiles, chatting, talking and sending messages to family members, friends and colleagues. The students realized that Web 2.0 tools could be used not only as communication and educational tools, but also as professional, social and multi-purpose tools. They added that it was apparent from these conceptions that DILL students had realized the various potentials of the Web 2.0 tools. Kim and Jang (2015) found that the tools support students' interactive participation in practical activities and contribute to their individual knowledge building and sharing through collaboration. Many researchers have explored purposes and benefits of integrating Web 2.0 tools in and out of the lecture room for undergraduates (An & Williams, 2010). Zakaria, Watson and Edwards (2010) conducted their research on the use of Web 2.0 tools by Malaysian students. The general opinion gathered about the integration of Web 2.0 tools into learning was positive. Turning his attention to potential advantages of Web 2.0 tools for education, Olasina (2011) stated that Web 2.0 tools enable learning anytime, anyplace and had been found to be especially useful to students and clinicians in remote and rural areas. In a study examining the impact of Web 2.0 tools on teaching information literacy, Brown and Bussert (2007) concluded that students' learning will increase due to personal engagement, frequent use of preferred learning-styles, and application to daily life. Currently, a wide variety of Web 2.0 tools with potential in teaching and learning are available for the use of educators and students. Through Web 2.0 tools/applications, students can develop necessary skills for computer literacy, communication, presentation, problem solving, collaboration, time management, attempt professional examinations, attend interview for internship and jobs and obtain professional-level positions. In addition, Web 2.0 tools can help students connect their theoretical knowledge to practical skills that will help them in their future jobs and careers. For example, Sendall, Ceccucci and Peslak (2008) indicate that it is essential for undergraduates to master using blogs, wikis, and social remarking sites and other collaborative tools as they enter the workforce.

Conole and Alevizou (2010) established that Web 2.0 tools provide particular opportunities for personalizing and contextualizing learning. To them, undergraduates now found it possible to deconstruct educational resources, tools and activities so that they can be recombined or remixed according to their preferences (the notion of 'mash ups'). Undergraduates with the use of Web 2.0

tools can also create their own content and resources, enabling increased creativity and flexibility within the curriculum.

Web 2.0 tools (specifically blogs and podcasts), according to Bannister (2008), were seen to be innovative and effective resources in supporting reading achievement for undergraduates. He averred that these resources have the potential to expand reading and writing in the lecture room. To him, areas such as fluency, vocabulary development and comprehension of texts were positively influenced through the use of these collaborative tools. He further posited that the strengths of these Web 2.0 tools are their sequential and archival features.

Bringing the study home, Eze (2016) in her study: Awareness and Use of Web 2.0 tools by LIS students at the University of Nigeria, Nsukka, Enugu State, Southeast, Nigeria found out that the major reasons for their use of Web 2.0 tools were to communicate with friends/family (95.9%), exchange opinions/news from personal interests (95.5%) and acquaint / meet people (95%). In the same study, about 90% of the respondents used them to keep up to date while 65.2% used them for fun. Only a few students indicated using the social networking sites for exchanging information for studies (25.5%) and curiosity (30%).

Related to using Web 2.0 tools to catch some fun is the perceived enjoyment of the tools. Perceived enjoyment is described as the extent to which the activities or services carried out with the use of Web 2.0 tools are perceived to be enjoyable. Similarly, perceived enjoyment of Web 2.0 technologies supports the building of an interactive learning environment for students (Hartshorne & Ajjan, 2009; Hossain & Quinn, 2014). According to Reeves (1998), the interactive classroom environment can be learner-centered, focusing on students seeking information for solving problems, performing tasks, demonstrating their newly gained knowledge to teachers, and performing collaborative activities. The learner-centered interactive environment can be implemented through many useful functions in a Web 2.0 application (Anderson, 2007).

Perceived Enjoyment (PE) is an intrinsic motivation that emphasizes the usage process and reflects the pleasure and enjoyment associated with the using a system. Perceived enjoyment is found to be positively related to attitude towards using a specific source. Enjoyment is one of the main reasons people opt to use Web 2.0 tools. Enjoyment in using a Website could significantly influences the intentions to use. New technologies that are considered enjoyable are less likely to be difficult to use. Al-hawari and Mouakket (2010) have investigated how perceived enjoyment could impact students' e-satisfaction and e-retention of e-learning system.

Perceived enjoyment should be taken into consideration to increase students' satisfaction, pleasure and hence, the frequency of using Web tools with flexible and aesthetic user interfaces. The study aimed at investigating the frequency and perceived enjoyment of the use of Web 2.0 tools by undergraduates in two Nigerian Universities.

Statement of the problem

Some undergraduates in Nigerian universities seemed familiar with the use of Web 2.0 tools basically for recreational purposes but they do not explore these innovative and interactive tools effectively to enhance their academic performance other than using the ubiquitous technology for fun seeking and pleasure through image and video uploading, online chatting, online transactions and the likes. Some undergraduates do not know that a good number of these Web 2.0 tools can be proficiently exploited to bring about robust value addition to their studies, in the areas of quantum access to some online resources, classroom work, research activities, and general performance in the teaching and learning situation. They are therefore faced with the problems of nervousness, apprehension and lack of confidence or ability in the use of Web 2.0 tools which may not allow them to use the tools frequently and/or enjoy using them. It is to this end that this study sets out to investigate how frequent and enjoyable are undergraduates in two Nigerian universities are finding the use of Web 2.0 tools for academic activities.

Objectives of the study

The main objective of this study is to investigate the frequency and perceived enjoyment of the use of Web 2.0 tools by undergraduates in two universities in Nigeria. The specific objectives are to:

i. ascertain the frequency of use of Web 2.0 tools for academic activities by the undergraduates;
ii. find out the level of perceived enjoyment of the use of Web 2.0 tools by the undergraduates and
iii. determine the influence of the perceived enjoyment on the use of the of Web 2.0 tools by the undergraduates.

Research questions

The following research questions have been raised to guide the study:

1. What is the frequency of use of Web 2.0 tools for academic activities by the undergraduates?
2. What is the level of perceived enjoyment of the use of Web 2.0 tools by the undergraduates?

Hypothesis

The study will test the following null hypotheses at 0.05 level of statistical significance:

Ho 1: There is no significant relationship between the perceived enjoyment of Web 2.0 tools and their use by the undergraduates.

Scope of the study

The study focuses on frequency of use and perceived enjoyment as its affect the use of Web 2.0 tools for academic activities by full time undergraduate students in two universities in Nigeria. The universities are Obafemi Awolowo University (OAU), and University of Ibadan (UI). The Web 2.0 tools to be considered include Official Websites and Blogsites, MySpace, Flickr, Orkut,

YouTube, Bookmarking, Google AD, E-Mail Tutorial, Scribd, Podcast, Twitter, Facebook, Instant Messaging: Whatsapp and BBM. The academic activities to be studied include attending online lectures, assignments, term paper and content generation for subjects.

Significance of the study

The findings of this study will be of significance to the undergraduates, as it would provide information on the factors that could facilitate the use of Web 2.0 tools for various purposes. The result of this study will also be beneficial to librarians because it will provide awareness on the frequency of use of these tools and hence, the most used tools for social, academic, and other activities in order to enable the provisions of such tools in the library for use. The study will also be of benefit to lecturers of the universities, in the sense that it will expose them to new (online) avenue of lecture delivery to encourage and enhance students' gainful learning with pleasure. Finally, this project work will be beneficial to researchers and scholars who might want to carry out further studies in this area of the study.

Perceived enjoyment and the frequency of use of Web 2.0 tools by students: A review of literature

Perceived enjoyment is one of the constructs conceptualised to constitute the Technological Acceptance Model (TAM) developed by Davis in 1989 (Su & Zhang, 2006; Liao, Tsou & Shu, 2008). Perceived enjoyment according to the authors had been added into TAM, and proved to be an important antecedent to behavior intention. It is conceived as the extent to which the activity of using technology is perceived to be enjoyable in its own right, apart from any performance consequences that may be anticipated (Bryce & Rutter, 2013). Students' perceived enjoyment according to Bryce and Rutter (2013) refers to the extent to which students expect to derive pleasure, fun and joy from using Web 2.0 tools. This implies that students may opt for the usage of Web 2.0 tools of any kind simply because they expect to experience a feeling of joy, elation, fun, pleasure and gratification from them, otherwise they may have no inclination or motivation to using the tools.

To further model the role of intrinsic motivation in the TAM, Moon and Kim (2001) and van der Heijden (2003) view perceived enjoyment as an intrinsic source of motivation, referring to the performance of an activity for no apparent reason other than the process of performance itself. Their research demonstrates that perceived enjoyment has an effect on both attitude and consumers' behavioural intention toward using a specified source. Similar to the construct of perceived enjoyment, a system perceived to be easy to use will be conceived as more fun to use, leading to a stronger linkage between perceived fun and attitude toward specific products but having no significant effect on consumers' behavioural intention (Bruner & Kumar, 2005).

Extant literature indicates that perceived enjoyment is a key intrinsic motive for adopting and utilizing Web 2.0 tools (Sherlock, 2007). Perceived enjoyment is the student's perception that by adopting new system or technology he/she will have pleasure. Using a new technology and interface will excite a person, motivating him/her to use that technology (Kanjwani & Singh,

2014). Kanjwani and Singh further averred that if a student is motivated by perceived enjoyment derived from Web 2.0 tools and also in the process of using the tools, the student ends up sharpening his/her meta-analysis skills, the intention of using the tools continuance can be expected to be high.

An individual can experience immediate enjoyment or fun from using a specific system like Web 2.0 and perceive any active involvement in using new technology to be enjoyable as in providing pleasure and joy in its own right, aside from any anticipated performance consequences (Davis, 1989; Igbaria, Schiffman, & Wieckowski, 1994; Venkatesh, 2000; Wahab, Jusoff, Al Momani, Noor & Zahari, 2011; Soares & Pinho, 2013; Chin & Ahmad, 2015). Prior studies of WWW and mobile commerce incorporate perceived enjoyment into the TAM to gain a more accurate prediction of user acceptance toward a specific source, primarily because a product or service used and associated with enjoyment contributes to the causal relationship (Moon & Kim, 2001; van der Heijden, 2003; Bruner & Kumar, 2005).

Perceived enjoyment in the usage of Web 2.0 tools context can be viewed as the degree to which the activity like chatting, games, file transfer and so on is perceived as fun, satisfying, exciting, and enjoyable and ultimately, pleasurable. Compared with other activities such as online shopping and information system usage, enjoying mobile phone service is more experience-oriented. To Wahab el al. (2011), the most important motive for students using Web 2.0 tools is seeking for fun and pleasure. It has been found that students who experience enjoyment and the emotional response of pleasure are more likely to be motivated to use Web 2.0 tools more frequently (Huang & Cappel, 2015).

Lin and Lu (2011) found that perceived enjoyment has a positive impact on users' technology acceptance. According to them, perceived enjoyment, as an intrinsic motivation, influenced the use of Web 2.0 tools. They further confirmed that it has the strongest impact on Web 2.0 tools use by students, the number of peers using them and on perceived usefulness. Studies have shown that the greater the perceived enjoyment, the more frequent the use of Web 2.0 tools by students for numerous purposes while in the university (Pinho & Soares, 2011).

Chinomona (2013) in his study, mobile gaming, perceived enjoyment and ease of play as predictors of student attitude and mobile gaming continuance intention in Vaal University of Technology, South Africa submitted that when a student perceived enjoyment from Web 2.0 tools for mobile gaming, it triggers a positive desire in him/her that eventually lead to his/her positive attitude towards intention to using it continually. In this case, perceived enjoyment serves as a type of hedonic value that affects a student's attitude and intention toward Web 2.0 tools. He concluded that concurrently, the perceived enjoyment can arouse a strong craving in the student that might necessitate future usage of Web 2.0 tools for mobile gaming continuance intention. Gautam, Davis and Lang (2012) established that perceived enjoyment can be influenced by the students' emotional states connected with high arousal within a competitive game situation. They concluded that this also leads to an increased motivation to keep using the tools. Though, it is obvious that

students will like to use Web 2.0 tools more frequently if they enjoy the tools irrespective of the types.

Perceived enjoyment, according to Chin and Ahmad (2015), is expressed as exploratory and subjective psychological experience in the context of information technology and computer-mediated environments. The perceived enjoyment derived by students on intentions to use e-payment for their tuition fee through Web 2.0 tools system is manifested through students' existing experience of using Debit and Credit cards, Internet and Global System of Mobile (GSM) technology. Students have started to acknowledge that how enjoyable Web 2.0 tools are is as important as how usable and useful they are (Blythe, Hassenzahl, & Wright, 2014).

In the context of online sources of information, perceived enjoyment (PE) is the student's perception that by interacting with colleagues, mates and even lecturers online he or she will have fun. Enjoyment is an efficient reaction and it affects the students' performance. Students can have fun searching academic information online. Perceived enjoyment has been found to have a significant effect on online interaction with peers (Hsu & Lu, 2004; Thong, Hong & Tam, 2006). Therefore, enjoyment becomes a vital construct for this study in determining students' use of Web 2.0 technologies for their academic activities.

METHODOLOGY

The *research design* employed for this study is the descriptive survey design. Descriptive survey research design requires systematic and scientific collection of data or information from the population or sample of the population, through the use of one or the combination of any of the following: personal interview, scale opinion questionnaire and direct observation. Descriptive survey is the most relevant design for this research in collecting original data for describing a population too large to be observed directly. This research design helped the study to analyse, interpret and state different relationships that exist between variables (Babbie, 2007).

Population of the study: The population for this study consists of undergraduate students of both University of Ibadan (UI) Oyo State, Nigeria and Obafemi Awolowo University (OAU) Ile-Ife, Osun state, Nigeria. According to the data collected from the Records Office of UI, there are thirteen (13) faculties offering undergraduate programmes with a population of thirteen thousand one hundred and fifty-three (13,153) undergraduates. The data collected from Academic Planning Unit of OAU showed that there are fourteen (14) faculties offering undergraduate programmes with a population of twenty-two thousand, seven hundred and forty-nine (22,749) undergraduates. This gives a total of thirty-five thousand, nine hundred and two students (35,902) as the population of the study (as seen in Table 1).

Table 1 Study population of undergraduates in OAU & UI

	Obafemi Awolowo University		**University of Ibadan**	
S/N	Faculty	No. of students	Faculty	No. of students
1	Administration	2,891	----------	---------
2	Agriculture	1,416	Agriculture and Forestry	1,368
3	Arts	2,495	Arts	1,695
4	Basic Med. Sciences	715	Basic Medical Sciences	521
5	Clinical Sciences	475	Clinical Sciences	1,161
6	Dentistry	176	Dentistry	190
7	Education	1,778	Education	1,613
8	Environmental design and management	1,677	----------	----------
9	Law	1,659	Law	707
10	Pharmacy	648	Pharmacy	421
11	----------	--------	Public Health	142
12	Science	2,966	Science	2,098
13	The Social Sciences	2,835	The Social Sciences	1,452
14	Technology	3,018	Technology	1,340
15	----------	------	Veterinary Medicine	445
	Total	**22,749**	**Total**	**13,153**

***key (-----)** programme not available
Source: *Records office UI and Academic Planning Unit, OAU2014/2015 Session*

Sampling technique and sample size: Multi-stage sampling technique was used to select the sample size for the study. At the first stage, eleven (11) faculties were purposively selected on the basis of their being available at both universities with the population of nineteen thousand eight hundred and fifty-eight (19,858) students. The faculties are: Agriculture, Arts, Basic Medical science, Clinical Sciences, Dentistry, Education, Law, Pharmacy, Science, The Social Sciences and Technology. At the second stage, a sampling fraction of 50% was used to select six (6) out of the eleven (11) faculties earlier selected and the selection was based on the randomization method. The Faculties include: Clinical science, Pharmacy, The Social sciences, Technology, Agriculture, and Dentistry. This gave a total number of 14,480 students. The final stage involves the use of a sampling fraction of 2% to select the sample size for each of the faculties.

Therefore, the sample size for this study comprises of 172 students from OAU and 118 from UI. This gave a total of two hundred and ninety (290) students (as presented in Table 2). This sample size is justified by Krejcie and Morgan (1970) cited in Hill (1998) who stated that a sample of 384 is enough for a population size of 100,000, thus the sample size is adjudged adequate for this study.

Table 2 Sample size of the study

Faculties	OAU		UI		
	Population	**Sample 2%**	**Population**	**Sample 2%**	**Sample size**
Clinical Science	475	10	1161	23	33
Pharmacy	648	13	421	8	21
Social Sciences	2,835	57	1,452	29	86
Technology	3018	60	1340	27	87
Agriculture	1416	28	1368	27	55
Dentistry	176	4	190	4	8
Total	**8568**	**172**	**5912**	**118**	**290**

Data collection instrument: The research collection instrument is a structured questionnaire. The questionnaire is in 3 sections: A, B and C. Section A collected information on demographic data of undergraduates to include faculty and level of study. Section B was on Frequency of use of Web 2.0 tools by undergraduate students using a Lickert's scale of Daily (5), weekly (4), Monthly (3) Occasionally (2) and Never (1). Section C was on Perceived Enjoyment. The Scale has a total number of eleven (11) questions adapted from related studies on Perceived Enjoyment by Tanakinjal et al (2012) and Bamigbola (2014). Items on this Scale were analysed on a 4-point Likert Scale of SA: Strongly Agree (4), A: Agree (3), D: Disagree (2), SD: Strongly Disagree (1) with a mean value of 2.5 which will form the basis for interpretations.

Validity of research instrument: To ensure face validity of the instrument, the questionnaire was submitted to experts, who read through and make necessary corrections in determining the appropriateness of the items going by the research objectives. Relevant suggestions were effected accordingly before administering the questionnaire to the respondents. The reliability of the instrument was tested on 30 participants outside the study area using Cronbatch Alpha method.
Method of data collection: The researchers personally administered the two hundred and ninety (290) copies of the questionnaire on the respondents in the selected faculties of the two universities.
Method of data analysis: Copies of the questionnaire were collected, coded and analysed. The Statistical Package for the Social Sciences (SPSS) was used for the analyses. Descriptive statistics such as simple percentages, frequency counts, means and standard deviation were used to analyze research questions while inferential statistics such as multiple regression and correlation analysis were used to test the hypotheses at 0.05 level of statistical significance.

RESULTS AND DISCUSSION

Result of Findings
This session is divided into five parts. The first part reports the questionnaire administration and response rate while part two deals with demographic variables of the respondents. The third part reports on the answers to the research questions. The fourth part, however, is on the test of the null hypothesis with the fifth part discussing the findings of this study.

Questionnaire administration and return rate: A total number of two hundred and ninety (290) copies of the questionnaire designed for this study were administered to respondents in the two universities (University of Ibadan & Obafemi Awolowo University). One hundred and seventy two (172) copies were administered at Obafemi Awolowo University, out of which one hundred and sixty seven (167) copies were duly filled and returned giving a response rate of 97.1%. In the same vein, one hundred and eighteen (118) copies were administered at the University of Ibadan out of which 114 (96.6%) copies were returned. The overall response rate from both universities as shown in Table 3 was 281 (96.9%).

Table 3: Response rate

Faculties	**Name of university**		**Total**
	UI	**OAU**	
Agriculture	27 23.7%	28 16.8%	55 19.6%
Clinical Science	25 21.9%	10 6.0%	35 12.5%
Dentistry	4 3.5%	4 2.4%	8 2.8%
Pharmacy	8 7.0%	11 6.6%	19 6.8%
Social Sciences	27 23.7%	54 32.3%	81 28.8%
Technology	23 20.2%	60 35.9%	83 29.5%
N	**114**	**167**	**281**

Information on the respondents' level of study is presented using the pie chart as seen in Figure 1

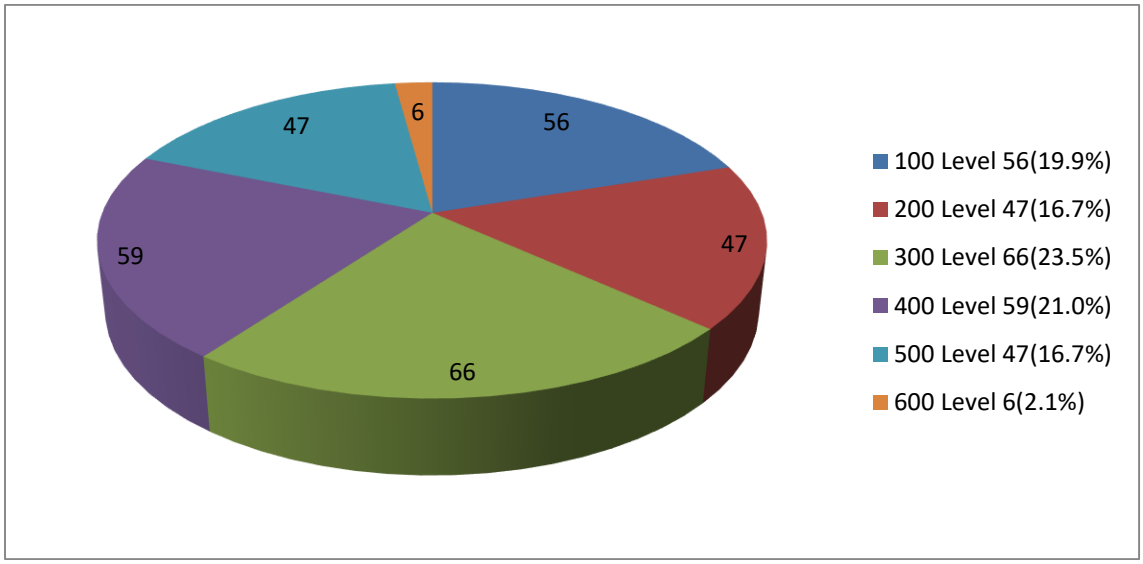

Fig. 1: Distribution of respondents by level of study

Figure 1 shows that 66(23.5%) respondents were in 300 level, 59(21.0%) were in 400 level while, 6(2.1%) were in 600 level. This implies that most of the respondents were quite familiar with the university environment since they have spent at least 2 years in their various universities. Therefore, they are expected to have adequate knowledge of the information that is required for the success of this study.

Answers to research questions

Research question one: What is the frequency of use of Web 2.0 tools for academic activities by the undergraduates?
Information on frequency of use of Web 2.0 tools for academic activities by the undergraduates is presented in Table 4.

Table 4: Frequency of use of Web 2.0 tools by the undergraduates

S/N	Web 2.0 tools		N	O	M	W	D	Mean	Std. Dev.
1	MySpace	F %	210 74.7	48 17.1	5 1.8	14 5.0	4 1.4	1.41	.866
2	Flickr	F %	217 77.2	46 16.4	9 3.2	5 1.8	4 1.4	1.34	.753
3	Orkut	F %	227 80.8	27 9.6	15 5.3	5 1.8	7 2.5	1.36	.863
4	YouTube	F %	27 9.6	107 38.1	24 8.5	73 26.0	50 17.8	3.04	1.319
5	Websites/Blogs	F %	58 20.6	82 29.2	25 8.9	35 12.5	78 27.8	3.07	1.795
6	Bookmarking	F %	98 34.9	83 29.5	18 6.4	34 12.1	48 17.1	2.47	1.490
7	GoogleAD	F %	61 21.7	73 26.0	13 4.6	42 14.9	92 32.7	3.11	1.608
8	E-Mail Tutorial	F %	74 26.3	61 21.7	23 8.2	55 19.6	68 24.2	2.94	1.562
9	Scribd	F %	173 62.0	51 18.3	25 9.0	19 6.8	11 3.9	1.72	1.125
10	Podcast	F %	169 60.1	59 21.0	17 6.0	21 7.5	15 5.3	1.77	1.180
11	Twitter	F %	68 24.2	84 29.9	22 7.8	60 21.4	47 16.7	2.77	1.450
12	Facebook	F %	28 10.0	72 25.8	15 5.4	46 16.5	118 42.3	3.55	1.490

Keys: Daily (D), Weekly (W), Monthly (M), Occasionally (O), and Never (N)

Table 4 showed that most of the respondents regularly used Facebook (mean = 3.55; std. = 1.490), GoogleAD (mean = 3.11; std. = 1.608), Websites/Blogs (mean = 3.07; std. = 1.795), YouTube (mean=3.04; std. = 1.319), E-Mail Tutorial (mean =2.94; std. = 1.562) and Twitter (mean =2.77; std. = 1.450). However, response rate showed that most of the respondents never used Flickr (mean = 1.34; std. = .753), Orkut (mean = 1.36; std. = .863) and MySpace (mean = 1.41; std. = .866). Based on the observation of results in Table 2, the types of Web 2.0 tools that were regularly used by the respondents include Facebook, GoogleAD, Websites/Blogs, YouTube, E-Mail Tutorial and Twitter.

Research question two: What is the level of perceived enjoyment of Web 2.0 tools by the undergraduates?
Table 5 presents the responses on perceived enjoyment of Web 2.0 tools by the undergraduates

Table 5: Perceived enjoyment of Web 2.0 tools by the Undergraduates

S/N	**Perceived enjoyment items**		**SD**	**D**	**A**	**SA**	**Mean**	**Std. Dev.**
1	I find Web 2.0 tools to be enjoyable	F %	7 2.5	18 6.4	167 59.4	89 31.7	3.20	.664
2	Using Web 2.0 tools enables me connect with others more quickly	F %	7 2.5	22 7.8	159 56.6	93 33.1	3.20	.685
3	I find it easy to get Web 2.0 tools to accomplish what I want it to do	F %	4 1.4	27 9.6	156 55.5	94 33.5	3.21	.667
4	I find Web 2.0 tools enjoyable in my daily routines	F %	9 3.2	38 13.5	139 49.5	95 33.8	3.14	.764
5	Learning to use Web 2.0 tools is easy and enjoyable for me	F %	1 0.4	26 9.3	171 60.9	83 29.5	3.20	.604
6	The actual process of using Web 2.0 tools is pleasurable	F %	1 0.4	19 6.8	185 65.8	74 26.3	3.40	.572
7	I have fun using Web 2.0 tools for academic purposes	F %	8 2.8	28 10.0	152 54.1	93 33.1	3.17	.718
8	Online/internet chatting on Web 2.0 tools is exciting	F %	4 1.4	21 7.5	154 54.8	102 36.3	3.26	.655
9	The whole idea of using Web 2.0 tools daily is delightful to me	F %	5 1.8	34 12.1	158 56.2	84 29.9	3.14	.687
10	Using Web 2.0 tools improves my social networking	F %	2 0.7	18 6.4	157 55.9	104 37.0	3.29	.615
11	It is easy for me to become skilful at using Web 2.0 tools	F %	9 3.2	21 7.5	157 55.9	94 33.5	3.20	.708

F: frequency

Table 5 shows that most of the respondents indicated that the actual process of using Web 2.0 tools is pleasurable (mean = 3.40; std. = .572). The respondents equally indicated that using Web 2.0 tools improves their social networking (mean = 3.29; std. = .615). In the same vein, most of the respondents affirmed that online/internet chatting on Web 2.0 tools is exciting (mean = 3.26; std. = .655). The least response showed that most of the respondents also affirmed that Web 2.0 tools are enjoyable in their daily routines (mean = 3.14; std. = .764). Similarly, respondents indicated that the whole idea of using Web 2.0 tools daily is delightful (mean = 3.14; std. = .687). Thus, it could be inferred that respondents perceived that enjoyment in the use of Web 2.0 tools lies in the fact that the actual process of using Web 2.0 tools is pleasurable, improves social networking, make Online/Internet chatting exciting and enjoyable. In order to affirm the level of perceived enjoyment of Web 2.0 tools, a test of norm was conducted. Results showed that the scale between 1 – 14 is low; 15 – 28 is moderate while, 29 – 44 is high. The overall mean for perceived enjoyment yielded 35.42 which fall between the scale 29 – 44. Therefore, it could be concluded that the level of perceived enjoyment of Web 2.0 tools by the undergraduates is high.

Testing the hypothesis

The null hypothesis formulated for this study was tested at 0.05 level of statistical significance and the result is as presented in Table 6.

Ho1: There is no significant relationship between the perceived enjoyment of Web 2.0 tools and their use by the undergraduates.

Table 6: Correlation matrix table showing the relationship between the variables

Variable List	Mean	Std. Dev.	Perceived usefulness	Perceived ease of use	Perceived enjoyment	Use of Web 2.0 tools
Perceived enjoyment	35.42	6.164	.634** .000	.584** .000	1	
Use of Web 2.0 tools	28.36	9.698	.363** .000	.291** .000	.291** .000	1
****. Correlation is significant at the 0.01 level (2-tailed); N = 281**						

Table 6 shows that there is a significant positive relationship ($r = .291$; $df = 280$; $p < 0.05$) between perceived enjoyment and use of Web 2.0 tools by the undergraduates. This implies that as the undergraduates improve in their perception about the enjoyment derived from the use of Web 2.0 tools, the more they will continue to use them. Therefore, the null hypothesis was rejected.

DISCUSSION OF FINDINGS

The study showed that the types of Web 2.0 tools that were regularly used by the respondents to include Facebook, GoogleAD, Websites/Blogs, YouTube, E-Mail Tutorial and Twitter. This supports Queensland University of Technology (2011) who maintained that learning and teaching activities now take place both in physical and virtual spaces with a range of tools, including Learning Management Systems (LMS), other university-supported applications and tools, and an increasing variety of public Web 2.0 domains (Facebook, Twitter, blogs, wikis, messenger, video-sharing sites and the likes). The finding also supports Smith, Salaway, and Caruso (2009) who submitted that students engage in content creation via other Web 2.0 tools including video-sharing websites (YouTube), wikis (Wikipedia), blogs, and podcasts.

The study showed that respondents perceived that enjoyment in the use of Web 2.0 tools lies in the fact that the actual process of using Web 2.0 tools is pleasant, improves social networking, makes online/internet chatting exciting and enjoyable. Thus, the level of perceived enjoyment of Web 2.0 tools by the undergraduates is high. This confirms the statement by Wahab et al., (2011) that perceived enjoyment is the degree to which performing an activity is perceived as providing pleasure and joy in its own right, aside from performance consequences. The finding supports Kanjwani and Singh (2014) who averred that if a student is motivated by perceived enjoyment derived from Web 2.0 tools and also in the process of using the tools, the student ends up sharpening his/her meta-analysis skills, the intention of using the tools continuance can be expected to be high.

The study established a positive and significant relationship between perceived enjoyment and use of Web 2.0 tools by the undergraduates. This supports Bryce and Rutter (2013) who stressed that perceived enjoyment refers to the extent to which students expect to derive pleasure, fun and joy from using Web 2.0 tools.

SUMMARY, CONCLUSION AND RECOMMENDATIONS

Summary of the findings

In order to achieve the objectives of the study, three research questions were formulated and one null hypothesis was tested at 0.05 level of statistical significance. The findings of the study revealed that:

1. The types of Web 2.0 tools that were regularly used by the respondents include Facebook, GoogleAD, Websites/Blogs, YouTube, E-Mail Tutorial and Twitter.
2. Most of the respondents perceived that enjoyment in the use of Web 2.0 tools lies in the fact that the actual process of using Web 2.0 tools is pleasurable, improves social networking, makes online/internet chatting exciting and enjoyable. Thus, the level of perceived enjoyment of Web 2.0 tools by the undergraduates is high.
3. There is a positive and significant relationship between perceived enjoyment and the use of Web 2.0 tools by the undergraduates.

Conclusion

Going from the findings, it was concluded that undergraduate students in the universities surveyed were regular users of Facebook, GoogleAD, Websites/Blogs, YouTube, E-Mail Tutorials and Twitter and had high perceived enjoyment of the use of these tools. Consequently, their perceived enjoyment of the Web 2.0 tools positively and significantly affected their use of the tools.

Recommendations

It is therefore recommended, going by the conclusion, that the undergraduate students be exposed to a wider range of Web 2.0 tools for a gainful learning engagements and experiences which may lead to good academic achievements. Provision of a very stable Internet connectivity is also advised for a faster, sustainable, more frequent and hence, enjoyable use of the Web 2.0 tools. More so, since perceived enjoyment is confirmed by this study as a factor in the use of the tools, it is suggested that modern computers and other state of the art ICT infrastructure should be provided and the environment of the Departmental and University ICT Laboratories should be made very conducive for a tireless, gainful, enjoyable and game-changing academic activities using the Web 2.0 tools.

Suggestions for further studies

Further studies could be carried out to investigate the influence of perceived enjoyment on the use of Web 2.0 technologies for academic activities by students in Nigerian Polytechnics for a broader perception of students' use behaviour of the tools across institutions of higher learning. A study

could further be conducted to establish the influence (if any) of demographical factors on the perceived enjoyment of the use of Web 2.0 tools by undergraduate students of universities in North-west, Nigeria as demographical location and background of students may affect their use of educational technologies generally and Web 2.0 tools in particular.

References

Achimugu P., Oluwagbemi O. and Adeniran A. (2010). Adoption of Information & Communication Technologies in developing countries: An impact analysis. *Journal of Information Technology Impact* 9 (1): 37-46.

Al-Daihani, S. (2010). Exploring the use of social software by master of library and information science students. *Library Review* 59(2): 117-131.

Al-hawari, M. and Mouakket, S. (2010). The influence of Technology Acceptance Model (TAM) factors on students' e-satisfaction and e-retention within the context of UAE e-learning. *Education Business and Society: Contemporary Middle Eastern Issues* 3(4): 299-314.

An, Y. J., and Williams, K. (2010). Teaching with Web 2.0 technologies: Benefits, barriers, and lessons learned. *International Journal of Instructional Technology and Distance Learning* 73: 41-48.

Anderson, P. 2007. "What is Web 2.0? Ideas, technologies and implications for education". *JISC Technology and Standards Watch,* February 2007. Bristol: Joint Information Systems Committee. Available at http://www.jisc.ac.uk/media/documents/techwatch/tsw0701b.pdf

Babbie, E. (2007) The practice of social research. 11th Edition, Thompson Wadsworth, Belmont

Bernsteiner, R., Ostermann, H. and Staudinger, R. (2008). Facilitating e-learning with social softWeb 2.0 Technologies for classroom instruction ware: Attitudes and usage from the student's point of view. *International Journal of Web- Based Learning and Teaching Technologies* 3(3): 16-33.

Blythe, M., Hassenzahl, M. and Wright, P. (2004). More funology. *Interactions* 11(5): 37-61

Brown, T. (2010). Construct validity: A unitary concept for occupational therapy assessment and measurement. *Hong Kong Journal of Occupational Theory* 20(1): 30-42. doi:10.1016/S1569-1861(10)70056-5.

Brown, N.E. and Bussert, K. (2007). Information literacy 2.0: Empowering students through personal engagement. Retrieved from the ERIC Document Reproduction Service (No. ED 500-136).

Bruner, G.C. and Kumar A. (2005). Explaining consumer acceptance of hand-held Internet devices. *Journal of Business Research* 58(5): 553-558.

Bryce, J. and Rutter, J. (2013). Gender dynamics and the social and spatial organization of computer gaming. *Leisure Studies* 22: 1–15.

Campbell, T., Wang, S., Hsu, H.Y., Duffy, A. and Wolf, P. (2010). Learning with web tools, simulations, and other technologies in science classrooms. *Journal of Science Education and Technology* 19(5): 505-511.

Chandra, V. and Chalmers, C. (2010). Blogs, wikis and podcasts: Collaborative knowledge building tools in a design and technology course. *Journal of Learning Design*, *3*(2): 35-49.

Cheema, U., Rizwan, M., Jalal, R., Durrani, F. and Sohail, N. (2013).The trend of online shopping in 21st century: Impact of enjoyment in TAM Model. *Asian Journal of Empirical Research* 3(2): 131-141.

Chin, P. and Ahmad, Z. A. (2015). Perceived enjoyment and Malaysian intention to use a single platform e-payment. Retrieved 11 August, 2015 from http://dx.doi.org/10.1051/shsconf/20151801009

Chinomona, R. (2013). Mobile gaming perceived enjoyment and ease of play as predictors of student attitude and mobile gaming continuance intention. *Mediterranean Journal of Social Sciences* 4(14): 237-247.

Conole, G., Alevizou, P. A. (2010). Literature review on the use of Web 2.0 tools in higher education. Milton Keynes, UK: The Open University, Walton Hall (Pp. 1-111). Retrieved, 04-09-2016 from https://www.heacademy.ac.uk

Cooper, Carol, and Lyn Boddington. (2005). "Assessment by blog: Ethical case studies assessment for an undergraduate business management class." In *Blogtalk Downunder "Emergent Conversations."* Sydney, Australia. http://incsub.org/blogtalk/?page_id=62.

Davi, A., Frydenberg. M. and Gulati, G.J. (2007). "Blogging across the disciplines: Integrating technology to enhance liberal Learning." *MERLOT Journal of Online Learning and Teaching* 3(3): 222-233

Davis F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly* 13(3): 319- 339.

Edirisingha, P., Rizzi, G., Nie, M. and Rothwell, L. (2007). "Podcasting to provide teaching and learning support for an undergraduate module on English Language and Communication." *Turkish Online Journal of Distance Education. TOJDE* 8(3): 87 – 107.

Eze, E. M. (2016). Awareness and use of Web 2.0 tools by LIS students at University of Nigeria, Nsukka, Enugu State, Nigeria. *Library Philosophy and Practice (e journal)* Summer:1-6.

Franklin, T. and van Harmelen, M. (2007). *Web 2.0 for content for learning and teaching in higher education.* London: Joint Information Systems Committee (JISC). Available at: http://www.jisc.ac.uk/publications/documents/web2andpolicyreport.aspx

Gautam, N., Davis, R. and Lang, B. (2012). *Conceptualising self-concept, self-efficacy and perceived enjoyment in the consumption of games* In Proceedings of the Marketing Academy Conference, New Zealand, Australia.

Guntram, G. (ed.) (2007), "Open educational practices and resources, OLCOS Roadmap 2012, Salzburg Research EduMedia Group, Salzburg" Available at: www.olcos.org/cms/upload/docs/olcos_roadmap.pdf (accessed 25 October, 2014).

Hartshorne, R. and Ajjan, H. (2009). Examining student decisions to adopt Web 2.0 technologies: Theory and empirical tests. *Journal of Computing in Higher Education* 21(3): 183-198.

Hendler, J. and Allemang, D. (2008). Semantic Web for the working ontologist. Amsterdam: Elsevier.

Hill, R. (1998). What sample is enough in Internet survey research? *Interpersonal Computing and Technology: An Electronic Journal for 21st Century* 63(4): 3-10.

Hossain, M. M. and Quinn, R. (2014). Pre-service mathematics teachers' perceptions of using Web 2.0 technology for instruction and achievement in a college Euclidean geometry course. *Journal of Research Initiatives*: 1(2) Available at: http://digitalcommons.uncfsu.edu/jri/vol1/iss2/5

Hsu, C.L. and Lu, H. P. (2004). Why do people play on-line games? An extended TAM with social influence and flow experience. *Information and Management* 41(7): 853-868.

Huang, Z. and Cappel, J. J. (2015). The iceberg model of Website usability. *Issues in Information Systems* 16(1): 21-27.

Igbaria, M.; Schiffman, S.J. and Wieckowski, T.J. (1994). The respective roles of perceived usefulness and perceived fun in the acceptance of microcomputer technology. *Behaviour and Information Technology* 13(6): 349-361.

Kanjwan, M. and Singh, P. (2014). Measuring the impact of enjoyment & excitement on online shopping with reference to TAM model. *International Journal of Applied Services Marketing Perspectives* 3(1): 792-803.

Khalid, M and Richardson, J. V. (2013). Impact of Web 2.0 technologies on academic libraries: A survey of ARL libraries. *The Electronic Library* 31(4): 508-520.

Kim, H. and Jang, H. Y. (2015). Motivating pre-service teachers in technology integration of Web 2.0 for teaching internships. *International Education Studies* 8(8): 21 – 32.

Krejcie, R.V. and Morgan, D.W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement* 30: 607-610.

Kumar, S. (2010). "Undergraduate perceptions of the usefulness of Web 2.0 in higher education: Survey development." Available at: https://www.researchgate.net/publication/228631630

Leung, K. and Kaiwahchu, S. (2009). "Using wikis for collaborative learning: A case study of an undergraduate students' group project in Hong Kong" Retrieved 25 May, 2010 from http://www.ickm2009.org/snews/upload/ickm_2009.

Liao, C., Tsou, C. and Shu, Y. (2008). The roles of perceived enjoyment and price perception in determining acceptance of multimedia-on-demand. *International Journal of Business and Information* 3(1): 27-52.

Lin, K. and Lu, H. (2011). Why people use social networking sites: An empirical study integrating network externalities and motivation theory *Computers in Human Behavior* 27(3):1152-1161.

Moon, J.W., and Kim, Y.G. (2001). Extending the TAM for a World-Wide-Web context. *Information and Management* 38(4): 217–230.

O'Reilly, T. (2005). What is Web 2.0: Design patterns and business models for the next generation of Software. Available at: https://www.oreilly.com/pub/a/web2/archive/what-is-web-20.html

Olasina, G. (2011). The Use of Web 2.0 tools and social networking sites by librarians, information professionals and other professionals in workplaces in Nigeria. Available at: *https://silo.tips/download/the-use-of-web-20-tools-and-social-networking-sites-by-librarians-information-pr*

Pinho, J. and Soares, A. 2011. Examining the technology acceptance model in adoption of social networks. *Journal of Research in Interactive Marketing* 5 (2/3): 116-129.

Queensland University of Technology (2011). QUT Annual Report. Australia: QUT Marketing and Communications. Available online at: https://digitalcollections.qut.edu.au/4922/1/2011-annual-report.pdf

Radel, Kylie (2011): Blending Web2.0 in marketing courses to engage students at distance: reflections on implementing 'Facebook' as a personal learning environment. CQ University Conference contributions. Available online at: https://hdl.handle.net/10018/918105

Reeves, T. C. (1998). The impact of media and technology in schools. A research report prepared for the Bertelsmann Foundation. Available at: https://www.researchgate.net/publication/237429044_The_Impact_of_Media_and_Technology_in_Schools_A_Research_Report_prepared_for_The_Bertelsmann_Foundation

Rogers, C. R. (2009) "Social media, libraries, and Web 2.0: How American libraries are using new tools for public relations and to attract new users" Available at: www.slideshare.net/crr29061/socialmedia-libraries-and-web-20-how-americanlibrariesare-using-new-tools-for-publicrelations-and-to-attract-new-users (accessed 12 October 2014).

Rosen, D. and Nelson, C. (2008). Web 2.0: A new generation of learners and education. *Computers in the Schools 25*(3): 211-225.

Salehe, Bajuna R. (2008). "Elimu 2.0: Investigating the use of Web 2.0 for facilitating collaboration in higher education" Available online at: http://arrow.dit.ie/scschcomdis/8.

Sandars J. and Schroter S. (2007). Web 2.0 technologies for undergraduate and postgraduate medical education: an online survey. *Postgraduate Medical Journal* Issue 986: 759–762.

Sendall, P., Ceccucci, W., and Peslak, A. (2008). Web 2.0 matters: An analysis of implementing Web 2.0 in the classroom. *Information Systems Education Journal* 6(64): 1-17.

Shafique, F., Anwar, M. and Bushra, M. (2010). "Exploitation of social media among university students: A case study" Available online at: *https://www.webology.org/data-cms/articles/20200515040256pma79.pdf*

Sherlock, L. M. (2007). When social networking meets online games: The activity system of grouping in World of Warcraft. In: Proceedings of the 2007 ACM International Conference on Design of Communication (14–20).

Smith, S. D., Salaway, G. and Caruso, J. B. (2009). The ECAR study of undergraduate students and information technology. *Educause Center for Applied Research* 6: 1–13.

Soares, M. A. and Pinho, J. C. (2013). Advertising in online social networks: The role of perceived enjoyment and social influence. Braga, Portugal: School of Economics and Management, University of Minho. Retrieved 26 August, 2015 from http://www.emeraldinsight.com/2040-7122.htm

Su, H and Zhang, P. (2006). Causal relationships between perceived enjoyment and perceived ease of use: An alternative approach. *Journal of the Association for Information Systems* 7(9): 618-645.

Thong, J. Y. L., Hong, S. J. and Tam, K.Y. (2006). The effects of post-adoption beliefs on the expectation-confirmation model for information continuance. *International Journal of Human Computer Studies* 64(9): 799-810.

Van der Heijden, H. 2003. Factors influencing the usage of websites: The case of a generic portal in the Netherlands. *Information and Management* 40(6): 541-549.

Venkatesh, V. and Davis, F. D. (2000). A Theoretical extension of the Technology Acceptance Model: Four longitudinal field studies**.** *Management Science* 46(2):186-204.

Virkus, S. and Bamigbola, A. A. (2011). Students' conceptions and experiences of Web 2.0 tools. Tallinn, Estonia: Institute of Information Studies, Tallinn University. Retrieved 26 August, 2015 from http://www.emeraldinsight.com/0307-4803.htm

Wahab, S., Jusoff, K., Al Momani, K. A. M., Noor, N. A. M. and Zahari, A. S. M. (2011). The influence of usability and enjoyment on electronic customer relationship management performance in Jordan mobile communication services. *Africa Journal of Business Management* 5(1): 128-134.

Zakaria M. H., Watson J. and Edwards, S. L. (2010). Investigating the use of Web 2.0 technology by Malaysian students. Retrieved 26 August, 2015 from http://www.emeraldinsight.com/1750-497X.htm