



**PERCEPTION OF UNDERGRADUATES TOWARDS
UTILIZATION OF ONLINE COLLABORATIVE TOOLS
FOR LEARNING**

***DR. ADEFUYE, ADETAYO LINUS; **DR. OMOYAJOWO
BAMIDELE STEPHEN; ***DR. OLUSANJO, MICHEAL
OLUWOLE; *PROF. AKOREDE O. JIMOH; ****OSISANWO. TEMITOPE. A.;
& *****ADEWOGA, THOMAS SUNDAY**

*Department of Educational Technology, College of Specialized and Professional Education (COSPED), Tai Solarin University of Education, Ijebu Ode, Ogun State, Nigeria. **E-Tutor Supervisor & Communications Officer, University of Ibadan, Distance Learning Centre. ***University Osun state College of Education, Ila Orangun. ****Department of Library and information Science, Tai Solarin University of Education, Ijebu Ode. *****Department of Biological Sciences, Tai Solarin University of Education, Ijebu Ode

Abstract

Online collaborative tools are online innovative and instructional tools that can be used to supplement traditional teaching and learning for the enhancements of students' positive academics performance. In spite of its immense instructional benefits, these tools have not been fully utilised for learning among undergraduates in Nigeria. Hence, the study examined the Perception of Undergraduates on the Utilization of online Collaborative tools for learning in selected Universities in South-west, Nigeria. The study concluded that there was a significant relationship between undergraduate students' perceived usefulness to use collaborative tools for learning. Based on the findings, the study recommends that government should give the necessary supports on the procurement of all needed facilities for collaborative learning. Undergraduates should help themselves by exhibiting high positive attitudes and competencies in the utilization of online collaborative tools. Also, Undergraduate should help themselves by making use of online collaborative tools for instructional purpose and shift their foci from using it for fun and entertainment.

Keywords: online collaborative tools, Undergraduates, learning, Utilization, Universities

Introduction

The importance of education to mankind cannot be overemphasized, most especially in the era of science and technology breakthrough. Kolawole and Aderogba (2019) defined education as a major tool for national socio-economic growth and development. National Policy on Education (FRN, 2014) stressed the importance of education as an instrument for change of any society where the need of individual citizens must be given adequate attention. The importance of education should cater for the needs of individual citizens and society at

large. Education is recognised as a basic right and a central element in human development and thus a prerequisite for achieving the wider social, cultural and economic goals (NPE, 2004). Education is a necessity and a worthwhile venture for the development of the nation (UNESCO, 2006).

The advancement, which ICT resources offer higher education, can be evident through accessibility to quality resource materials and utilization in instructional delivery. Particularly, teachers are competent in the use of resource materials to enhance learners' creativity and intellectual development. In the era of information explosion and technological development, the inclusion of ICT in the teaching and learning process cannot be overlooked (Ozaji, 2003).

Catherine et al (2020) defined education as a process of preparing children for the real world by giving them the tools they need to live and function on their own. In the past, a person was considered literate based on his or her ability to read and write. However, in recent time, being literate has gone beyond these alone to include how utilise online technological devices (Mullen & Wedwick, 2008). The world is experiencing a wave of social and technological transformation as the society is becoming more oriented to the usage of ICT. Today, people live in a society where instantaneous worldwide communication through electronic media such as Internet, computer as soon becomes common.

Perceived usefulness, according to Davis (1989), is the degree to which a person believes that using a particular system would enhance his or her job performance while perceived ease of use is the degree to which a person believes that using a particular system would be free from effort. Attitude is the controller of actual behaviour of an individual, consciously or unconsciously (Yusuf, 2005). Ogunlade, Joshua & Charles, (2016) described attitude as an accumulation of information about an object, person, and situation or experience a disposition to act in a positive or negative way toward some object. Ogunlade, Joshua & Charles, (2016), attitudes toward any object play an extremely important role in influencing subsequent behaviours towards it.

Statement of the Problem

Online collaborative tools are not the only effective learning collaborative tools. The application of online collaborative tools for learning, particularly in Nigerian universities is still at its infancy Aladesusi (2016) cited in (Christopher, Kayode, Shedrach & James 2014). Majority of Nigerian undergraduate students are neither familiar, nor skilful in employing these tools in the process of learning. It is of high importance that the conventional learning method should be supplemented with online collaborative tools like Blog, Twitter, Skype, YouTube, Wikki, Google Docs, LinkedIn, Drawbox, Facebook, Flickr which can stimulate and arouse students' interest to learn effectively. This will greatly influence their academic performance positively and consequently facilitate learning.

Research Questions

The study will provide answers to the following research questions:

1. What types of online collaborative tools available for learning among undergraduates in South-West Nigeria?
2. What is the perception of undergraduates towards the usefulness of online collaborative tools for learning in South-west Nigeria?

Literature Review

Undergraduate Student Perception on Utilisation of Online Collaborative Tools for Learning

Collaborative tools, integrating a variety of media to deliver teaching material to students is increasingly prevalent in university education. Collaborative learning tools is often associated with the use of web tools such as email, lecture recordings, blogs, discussion boards, and a dedicated university learning management system (for example Blackboard). Institutional based learning management systems are being used by universities all over the world. These systems are often designed to provide a web presence for course instruction and assist with the organisation and management of course material (Coates, James & Baldwin, 2005).

Typically, they propose to offer an environment that helps to engage students and enrich the quality of the student experience through interactive learning activities. In general, they are designed to support the development, management, and delivery of blended learning. However, there are some suggestions that whilst learning management systems are well developed to manage processes such as student enrolment, exams, assignments, course descriptions, lesson plans, messages, syllabus, and basic course material, they are not well suited to self-governed and problem-based learning activities (Dalsgaard, 2012).

In addition, these programs often lack an element of social connectivity and the personal profile spaces which today's students are familiar with (Mazman & Usluel, 2010). The emergence of collaborative software and popular networking sites such as Facebook, blog, wikki, Flickr, goggle apps have raised questions regarding the value of course integrated learning management systems. Social networks have the potential to offer better support for self-governed, problem-based and collaborative learning processes (Dalsgaard, 2006). Facebook, blog wikki and other collaborative tools is a website that allows users to interact and collaborate within a pre-defined virtual community. Often termed a social networking site, collaborative tools are an online communication tool allowing users to construct a public or private profile in order to connect and interact with people who are part of their extended social network (Boyd & Ellison, 2007).

The majority of undergraduate students at university or college use collaborative tools on a daily basis (Hewitt & Forte, 2006; Kirschner & Karpinski, 2010; Madge, Meek, Wellens & Hooley, 2009; Ophus & Abbitt, 2009; Roblyer, McDaniel, Webb, Herman & Witty, 2010; Santos, Hammond, Durli & Chou, 2009; Subrahmanyam, Reich, Waechter & Espinoza, 2008; Wise, Skues & Williams, 2011; Wolfe, 2007). Whilst there are some reports that students use collaborative tools instinctively to support both their academic and social goals (Bosch, 2009; Madge, 2009; Mazman & Usluel, 2010; Tian, Yu, Vogel & Kwok, 2011), the majority of evidence suggests that students' main motive for using Facebook is for social

connectivity (Bosch, 2009; Madge et al., 2009; Mazman & Usluel, 2010; Ophus & Abbitt, 2009; Roblyer, 2010; Subrahmanyam, 2008; Wise, 2011).

A recent study by Wise (2011) examining Facebook use by first year psychology students found that students spent an average of one hour per day on the site, but that use was predominately to engage in social interactions. Only a small proportion of the student sample (4.9% of 390 students surveyed) reported that collaborative tools provided them with information, and the authors suggested that collaborative tools has a limited role in supporting student academic engagement. Since its introduction, online collaborative tools has rapidly influence academic learning positively (Mazman & Usluel, 2010). Despite being known primarily for social networking activity, online collaborative tools are quickly being recognised as a respectable e-learning platform (Bosch, 2009). Compared with traditional university course sites, students are more engaged with collaborative tools. In addition, some studies suggest that students are receptive to the possibilities of integrating online collaborative tools into university courses, with the potential for learning benefits associated with increased communication among students, greater access to course materials, and improved logistical management of courses (Bosch, 2009; Madge et al., 2009; Ophus & Abbitt, 2009).

Social networking sites engage students in online learning communities using technologies familiar to and accepted by their generation (Oradini & Saunders, 2008). Incorporation of this pedagogical strategy could offer new opportunities to enhance academic instruction and student learning experiences (Ouf, Nasr, & Helmy, 2010). For example, Facebook has the capacity to support course management activities, enhance the provision of information and resources to students, as well as engage and motivate students through interactivity and collaboration (Naidu, 2005). Using Facebook as a host site to incorporate assessment, McCarthy (2010) reported positive student feedback for its integration into the learning environment. Students in this study noted many advantages of the online learning environment and Facebook tasks.

Reports of improved academic relationships being developed between both domestic and international student groups, the generation of rewarding academic discussions that were beneficial for study, and increased interaction with the peer group were among the main findings. In a more recent study, McCarthy (2012) explored the use of Facebook as an alternative to traditional face to face mentoring of undergraduate and postgraduate students across internationally separated universities. Reports of the student experience from the mentoring scheme were positive from both international partners. Students believed Facebook was a valuable resource as an academic tool, improving the development of academic connections and promoting academic critiques, discussion and networking to enhance the learning experience. Rambe (2012) also noted that Facebook benefited students by promoting visibility of common problems that students had with course based concepts, whilst allowing academics to more easily recognise challenges students were experiencing with the course. The use of Facebook as a learning environment in higher education is not without potential risks and limitations.

Questions regarding content ownership, privacy, stalking and cyberbullying, and virtual integrity are often issues that require consideration (Cluett, 2010; McCarthy, 2012; Willems & Bateman, 2011). In addition, concerns about Facebook as a form of distraction (Wise et al., 2011) and the influence it has on academic performance (Kirschner & Karpinski, 2010) have been raised. Most studies examining Facebook in a university context have focused on students' use of the web application and its subsequent impact on study time. Conflicting evidence exists on the impact of Facebook on dedicated study time with some authors suggesting that Facebook users spend less time studying and achieve lower academic results compared to Facebook non-users (Kirschner & Karpinski, 2010), whereas other authors have not found this association (Kabre & Brown, 2011). However, the limitation of these studies is that they have explored the impact of Facebook on individual academic performance, independent of its potential to provide other educational benefits to students.

Student satisfaction with university education is becoming ever more important, and studies have shown that student satisfaction has a positive impact on student motivation and retention, amongst other institutional benefits (Elliott & Shin, 2002). Incorporation of Facebook into the learning resources of university courses may impact upon student satisfaction of course delivery, as they are able to integrate academic requirements with a social networking platform that they are familiar and highly engaged with. University education is student focused and it is therefore important to consider students' perceptions of technology that is integrated into their learning environment. The aim of this study was to evaluate student perceptions of using a designated 'Facebook page' as a learning resource within university courses. It was hypothesised that 'Facebook pages' associated with university courses would be widely utilised by enrolled students, lead to greater communication between students, and enhance student's interaction with the course instructor and associated learning resources.

Methodology

This chapter presents the methods and procedures that was employed in the process of collecting data for this research. It will be presented under the following sub-headings: Research Design, Sample and Sampling Technique, Research Instrument, Validation of Research Instrument, Procedures for Data Collection and Data Analysis Techniques.

Research Design

This study is a descriptive research using cross-section survey method. The study is descriptive in the sense that the research describes events as they appear without any manipulation. A researcher-designed questionnaire was used to collect information from the respondents on the Perception of Undergraduates on the utilisation of Online Collaborative Tools for learning in selected Universities in South-West, Nigeria. Survey method was chosen for the study because it enabled the researcher to gather large amount of information on Undergraduates' perception of collaborative tools for learning.

Sample and Sampling Techniques

The population for the study consists all the university undergraduate students in the South-western States of Nigeria. The target population for this study were all undergraduates' students of the Faculty of Science and Education in all Federal and State universities in South-west Nigeria.

Stratified random sampling technique was used to select undergraduates along gender from the Faculty of Science and Education of the federal and state Universities so as to obtain clear data for the variables of gender that was used for the analysis. This was done across departments in each of the selected faculties in the universities.

Research Instrument

The instrument for this study was a questionnaire adapted from the previous studies of Lund (2001)¹⁰⁶, Moon, Ji-won and Kim (2001)¹⁰⁶ and Olasedidun (2014). The questionnaire titled perception of undergraduates on the utilisation of online collaborative tools for learning. Items were selected based upon their relevance to perceived usefulness, perceived ease of use, attitudes toward use and intention to use online collaborative tools for learning.

Section III was sub-divided into four (A-D). These sub-divisions are:

- A. Undergraduate perceived usefulness of online collaborative tools for learning. The response mode for the items was Likert type rating of Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD).

Data Analysis Techniques

The analysis of data that was gathered through the questionnaire was done using descriptive and inferential statistics. The frequencies were converted to mean to answer the research questions

RESULT

Results of the Research Questions

Research Question One: What types of online collaborative tools are available for learning among undergraduates in South-West Nigeria?

Table 1: Available Online Collaborative Tools for Learning

| S/N | Online Collaborative Tools | AVAILABLE | | NOT AVAILABLE | | Total |
|-----|----------------------------|-----------|-------|---------------|-------|----------------|
| | | N | % | N | % | |
| 1. | Facebook | 1322 | 93.6% | 90 | 6.4% | 1412 (100%) |
| 2. | Google Plus (Google +) | 986 | 69.8% | 426 | 30.2% | 1412 (100%) |
| 3. | To Go | 746 | 52.8% | 666 | 47.2% | 1412 (100%) |

| | | | | | | |
|-----|-------------|------|-------|------|-------|----------------|
| 4. | Twitter | 1078 | 76.3% | 334 | 23.7% | 1412 (100%) |
| 5. | Flicker | 650 | 46.0% | 762 | 54.0% | 1412 (100%) |
| 6. | You Tube | 983 | 69.6% | 429 | 30.4% | 1412 (100%) |
| 7. | Digg | 429 | 30.4% | 983 | 69.6% | 1412 (100%) |
| 8. | Technorah | 439 | 31.1% | 973 | 68.9% | 1412 (100%) |
| 9. | Scribd | 500 | 35.4% | 912 | 64.6% | 1412 (100%) |
| 10. | Rogo | 463 | 32.8% | 949 | 67.2% | 1412 (100%) |
| 11. | Hi5 | 621 | 44.0% | 791 | 56.0% | 1412 (100%) |
| 12. | Linkedin | 1028 | 72.8% | 384 | 27.2% | 1412 (100%) |
| 13. | Bebo | 456 | 32.3% | 956 | 67.7% | 1412 (100%) |
| 14. | Friendster | 503 | 35.6% | 909 | 64.4% | 1412 (100%) |
| 15. | Orkut | 411 | 29.1% | 1001 | 70.9% | 1412 (100%) |
| 16. | Myspace | 868 | 61.5% | 544 | 38.5% | 1412 (100%) |
| 17. | Blogger.com | 884 | 62.6% | 528 | 37.4% | 1412 (100%) |
| 18. | Ning | 500 | 35.4% | 912 | 64.6% | 1412 (100%) |
| 19. | Twoo | 482 | 34.1% | 930 | 65.9% | 1412 (100%) |
| 20. | Slideshare | 658 | 46.6% | 754 | 53.4% | 1412 (100%) |
| 21. | Vimeo | 498 | 35.3% | 914 | 64.7% | 1412 (100%) |
| 22. | What's Aps | 1226 | 86.8% | 186 | 13.2% | 1412 (100%) |

The types of online collaborative tools are available for learning among undergraduates in South-West Nigeria was investigated and the results were presented in table 8. Out of the

1412 respondents, 1322 (93.6%) had Facebook while 90 (6.4%) do not have Facebook as online collaborative tools. Google Plus (Google +) is available to 986 (69.8%) but not available to 426 (30.2%). Also, To-Go is available to 746 (52.8%) while is not available 666 (47.2%). Twitter is available to 1078 (76.3%) respondents but not available to 334 (23.7%) respondents. 650 (46.0%) respondents had Flickr online collaborative tools while 762 (54.0%) do not have. You Tube is available to 983 (69.6%) respondents and not available to 429 (30.4%) respondents. Digg is available to 429 (30.4%) respondents but not available to 983 (69.6%) respondents. 439 (31.1%) respondents had Technorah while 973 (68.9%) respondents do not have Technorah. Scribd is available to 500 (35.4%) but not available to 912(64.6%) respondents.

Furthermore, Rogo is available to 463 (32.8%) respondents but not available to 949 (67.2%) respondents. Hi5 is also available to 621 (44.0%) respondents but not available to 791 (56.0%). 1028 (72.8%) respondents had LinkedIn but 384 (27.2%) do not have LinkedIn online collaborative tools. Bebo is available to only 456 (32.3%) respondents but not available to 956 (67.7%) respondents. Friendster is also available to 503 (35.6%) respondents but not available to 909 (64.4%) respondents. Orkut is available to 411 (29.1%) respondents but not available to 1001 (70.9%) respondents. Myspace is available to 868 (61.5%) respondents but not available to 544 (38.5%) respondents. Blogger.com is available to 884 (62.6%) respondents but not available to 528 (37.4%) respondents. Ning is available to 500 (35.4%) respondents but not available to 912 (64.6%) respondents. Twoo is available to 482 (34.1%) respondents but not available to 930 (65.9%) respondents. Also, Slideshare is available to 658 (46.6%) respondents but not available to 754 (53.4%) respondents.

Moreover, the findings established that Vimeo is available to 498 (35.3%) respondents but not available to 914 (64.7%) respondents. 1226 respondents with a percentage of 86.8% had What's Aps online collaborative tools and 186 respondents with a percentage of 13.2% do not have What's Aps online collaborative tools. On the whole it can be established from the findings that majority of the respondents had the following online collaborative tools: Facebook, Google Plus (Google +), To Go, Twitter, You Tube, LinkedIn, Myspace, Blogger.com and What'saps.

Research Question Two: What is the perception of undergraduates towards the usefulness of online collaborative tools for learning in South-west Nigeria?

Table 2: Perceived Usefulness of Online Collaborative Tools for learning

| S/N | | SA | | A | | D | | SD | | Mean | SD |
|-----|---|-----|-------|-----|-------|-----|------|----|------|------|------|
| | | N | % | N | % | N | % | N | % | | |
| 1) | Online Collaborative tools like wiki, are useful for learning | 887 | 61.4% | 503 | 35.6% | 30 | 2.1% | 12 | 0.8% | 3.58 | .581 |
| 2) | Online Collaborative tools for example, Blogs enhances and | 649 | 46.0% | 574 | 40.7% | 138 | 9.8% | 51 | 3.6% | 3.29 | .786 |

| | | | | | | | | | | | |
|-----|---|-----|-------|-----|-------|-----|-------|-----|-------|------|------|
| | stimulate my learning | | | | | | | | | | |
| 3) | Online Collaborative tools such as google doc are reliable backup for my learning materials | 865 | 61.3% | 499 | 35.3% | 48 | 3.4% | - | - | 3.58 | .559 |
| 4) | Online Collaborative tools e.g. Google plus enhance my exposure to relevant media and learning materials | 736 | 52.1% | 536 | 38.0% | 110 | 7.8% | 30 | 2.1% | 3.40 | .724 |
| 5) | Online Collaborative tools such as WhatsApp Increased my interaction with course instructor and fellow students | 559 | 39.6% | 576 | 40.8% | 194 | 13.7% | 83 | 5.9% | 3.14 | .865 |
| 6) | Online Collaborative tools like blog enhance my participation in general discussion about course topics | 494 | 35.0% | 676 | 47.9% | 165 | 11.7% | 77 | 5.5% | 3.12 | .819 |
| 7) | Online Collaborative tools for example, like SlideShare would improve my learning performance | 297 | 21.0% | 648 | 45.9% | 412 | 29.2% | 55 | 3.9% | 2.84 | .796 |
| 8) | Online Collaborative tools like SlideShare save time when used for learning | 489 | 34.6% | 523 | 37.0% | 345 | 24.4% | 55 | 3.9% | 3.02 | .864 |
| 9) | Online Collaborative tools e.g. Facebook give more control over learning activities | 471 | 33.4% | 389 | 27.5% | 381 | 27.0% | 171 | 12.1% | 2.82 | 1.03 |
| 10) | Online Collaborative tools help stay focused on the task at hand when using Whatsapp for learning | 341 | 24.2% | 537 | 38.0% | 361 | 25.6% | 173 | 12.3% | 2.74 | .960 |

| | | | | | | |
|---|--|--|--|--|------|--|
| Perceived usefulness of online collaborative tools for learning | | | | | 3.15 | |
|---|--|--|--|--|------|--|

Table 9 presents the results on the perception of undergraduates towards the usefulness of online collaborative tools for learning in South-west Nigeria. The findings indicated that out of the 1412 respondents, majority of the respondents (867 & 61.4%) strongly agreed that Online Collaborative tools like wiki, are useful for learning, 503 (35.6%) respondents agreed, 30 (2.1%) respondents disagreed while 12 (0.8%) respondents strongly agreed. With a mean score of 3.58, majority of the respondents believed that Online Collaborative tools are useful for learning. 649 respondents strongly agreed that Online Collaborative tools for example, Blogs enhances and stimulate my learning, 574 (40.7%) respondents agreed, 138 (9.8%) respondents disagreed while 51 (3.6%) respondents disagreed. A mean score of 3.29 established that most of the respondents agreed that Online Collaborative tools enhances and stimulate their learning. Also, 865 (61.3%) respondents strongly agreed that Online Collaborative tools such as google doc are reliable backup for their learning materials, 499 (35.3%) respondents agreed, 48 (3.4%) respondents disagreed while none of the respondents strongly disagreed. The mean score of 3.58 asserted that majority of the respondents agreed that Online Collaborative tools are reliable backup for their learning materials.

Further, 736 (52.1%) respondents strongly agreed that Online Collaborative tools e.g. Google plus enhance their exposure to relevant media and learning materials, 536 (38.0%) respondents agreed, 110 (7.8%) respondents disagreed while 30 (2.1%) respondents strongly disagreed. With a mean score of 3.40, most of the respondents believed that Online Collaborative tools enhance their exposure to relevant media and learning materials. 559 (39.6%) respondents strongly disagreed that Online Collaborative tools such as WhatsApp Increased their interaction with course instructor and fellow students, 576 (40.8%) respondents agreed, 194 (13.7%) respondents disagreed while 83 (5.9%) respondents strongly disagreed. A mean score of 3.14 deduced that majority of the respondents believed that Online Collaborative tools increased their interaction with course instructor and fellow students. 494 (35.0%) respondents strongly agreed that Online Collaborative tools like blog enhance their participation in general discussion about course topics, 676 (47.9%) respondents agreed, 165 (11.7%) respondents disagreed while 77 (5.5%) respondents strongly disagreed. With a mean score of 3.12, majority of the respondents agreed that Online Collaborative tools enhance their participation in general discussion about course topics.

Moreover, 297 (21.0%) respondents strongly agreed that Online Collaborative tools for example, like SlideShare would improve their learning performance, 648 (45.9%) respondents agreed, 412 (29.2%) respondents disagreed, while 55 (3.9%) respondents strongly disagreed. A mean score of 2.84 established that most of the respondents believed

that Online Collaborative tools would improve their learning performance. 489 (34.6%) respondents strongly disagreed that Online Collaborative tools like SlideShare save time when used for learning, 523 (37.0%) respondents agreed, 345 (24.4%) respondents disagreed while 55 (3.9%) respondents strongly disagreed. With a mean score of 3.02, majority of the respondents agreed that Online Collaborative tools save time when used for learning. The findings established that 471 (33.4%) respondents strongly agreed that Online Collaborative tools e.g. Facebook give more control over learning activities 389 (27.5%) respondents agreed, 381 (27.0%) respondents disagreed while 171 (12.1%) respondents strongly disagreed. A mean score of 2.82, respondents believed that Online Collaborative tools give more control over learning activities. Lastly, 341 respondents with a percentage of 24.2% strongly agreed that Online Collaborative tools help stay focused on the task at hand when using WhatsApp for learning, 537 (38.0%) respondents agreed, 361 (25.6%) respondents disagreed while 173 (12.3%) respondents disagreed.

The grand mean score on Perceived usefulness of online collaborative tools for learning was 3.15. A response mode of 4-likert scale of strongly agreed, agreed, disagreed and strongly disagreed was used, thus a benchmark of 2.50 is appropriate. Since the grand mean score of 3.15 was greater than 2.50, it can be deduced that most respondents Perceived online collaborative tools to be useful for learning.

Discussion of Research Findings

The types of online collaborative tools available for learning among undergraduates in South-West Nigeria were investigated using research question 1. Such collaborative tools include Facebook, Google Plus (Google +), 2Go, Twitter, You Tube, LinkedIn, Myspace, Blogger.com and WhatsApp among others. The result of the mean score established that online collaborative tools are available for learning among undergraduates. This findings agreed with the previous findings of (Parker,2009; Trentin, 2009) whose findings established that collaborative tools such as Twitter, Facebook, MySpace, Wikis, Google Docs, and Blogs which allow the exchange of thoughts via the Web without restrictions of time or place . The author further reiterated that global development, collaboration has become an essential skill necessary for effective learning. This findings also concur with earlier findings of (Engstrom & Jewett, 2005) whose findings established that web-based open-editing functions of collaborative tools such as Wikis allow a relatively low-cost knowledge creation process.

The perception of undergraduates towards the usefulness of online collaborative tools for learning was examined using research question 2. Such perceived usefulness includes online collaborative tools like wiki, are useful for learning, Online Collaborative tools for example, Blogs enhances and stimulate my learning, Online Collaborative tools such as google doc are reliable backup for my learning materials among others. The result of the mean score established that most respondents perceived online collaborative tools to be useful for learning. This finding agreed with the earlier findings of (Kirschner & Karpinski, 2010). The majority of undergraduate students at university or college use collaborative tools on a daily

basis. This finding also concurs with the earlier findings of Wise (2011) examining Facebook use by first year psychology students found that students spent an average of one hour per day on the site, but that use was predominately to engage in social interactions. Only a small proportion of the student sample (4.9% of 390 students surveyed) reported that collaborative tools provided them with information, and the authors suggested that collaborative tools has a limited role in supporting student academic engagement. This study could not locate any findings to support or contradict the findings of this study.

Based on the mean values of the results of the perception of undergraduates towards the ease of use of online collaborative tools for learning, the respondents' perception was positive. The grand mean score showed positive perception. This revealed that there will not be much difficulty in making use of collaborative tools for learning among undergraduates in South-West Nigeria.

This findings is consistent with the previous findings of (Min, JI & QU, 2008) perceived ease of use" (PEOU), which is defined as the extent to which an individual believes that using a particular technology would be free of stress and TAM2 extended TAM by including subjective norm as an additional predictor of intention to use. This study concurs with the previous findings of Min, JI and QU (2008) who defined perceived usefulness (PU) as the degree to which a person believes using a particular system. The utilisation of the online collaborative tools for learning would enhance students' performance and perceived ease of use (PEOU), which is defined as the degree to which a person believes that using a particular system would be free of effort

From the above findings, it can be deduced that perceived ease of use has prominent role in the meta-analysis of the relationship between the characteristics of an innovation and its adoption. This showed that majority of the undergraduates are not likely to have problem if collaborative tools should be finally integrated into learning. Capacity building of students as well as administrators and managers will therefore play a major role.

Conclusions

This research explored the relationship among lecturers' perceived usefulness, ease of use, attitude and intention towards collaborative tools in South-West Nigeria. The result obtained from data gathered and analyzed in this study indicated that the perception of undergraduates toward the usefulness of collaborative tools for learning was positive. It also showed that the undergraduates positively perceived the ease of use of collaborative tools for learning.

Recommendations

Based on the findings and conclusions of this study, the following recommendations were made:

Government should give the necessary supports on the procurement of all needed collaborative facilities. This could be in form of free excise duty, reduction in their prices

and free supply of the facilities into higher institutions. This will encourage all undergraduates to embrace its integration;
Undergraduates should help themselves by exhibiting high competencies in the utilisation of collaborative tools for cooperative learning;

Reference

- Aladesusi G. A. (2016). University of Ilorin Effect of Blog on College of Education Student Performance in Selected Educational Technology concepts in Kwara State, Nigeria. Unpublished theses for Degree of Masters of Education (Educational Technology, University of Ilorin).
- Bosch, T. E. (2009). Using online social networking for teaching and learning: Facebook use at the University of Cape Town. *Communication: South African Journal for Communication Theory and Research*, 35(2), 185-200.
- Boyd, D. M., & Ellison, N. B. (2007). Social network sites: Definition, history, and scholarship. *Journal of computer-mediated Communication*, 13(1), 210-230.
- Catherine, L. E., Javier, B., & Francisco, G. (2020). Four pillars of the Montessori method and their support by current neuroscience. *Mind, Brain, and Education*, 14(4), 322-334.
- Cluett, L. (2010). Online social networking for outreach, engagement and community: The UWA Students' Facebook page. In *Educating for sustainability. Proceedings of the 19th Annual Teaching Learning Forum*, 28-29
- Coates, H., James, R. & Baldwin, G. (2005). A critical examination of the effects of learning management systems on university teaching and learning. *Tertiary Education and Management*, 11(1), 19-36.
- Dalsgaard, C. (2006). Social software: E-learning beyond learning management systems. *European Journal of Open and Distance Learning*, 2006(II). http://www.eurodl.org/materials/contrib/2006/Christian_Dalsgaard.htm
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS quarterly*, 319-340.
- Engstrom, M. E., & Jewett, D. (2005). Collaborative learning the wiki way. *TechTrends*, 49(6), 12.
- Kabre, F., & Brown, U. J. (2011). The influence of Facebook usage on the academic performance and the quality of life of college students. *Journal of Media and Communication Studies*, 3(4), 144.
- KOLAWOLE, R. O., & ADEROGBA, A. J. (2019). POSTGRADUATE STUDENTS' MODE OF STUDY AND THEIR UTILIZATION OF MOBILE TECHNOLOGIES FOR LEARNING IN SOUTH-WEST, NIGERIA. In *Conference Proceedings of the AITIE 3rd International Conference and Workshop on Innovation, Technology and Education (ICWITE, Abuja 2019)* (p. 116).
- Madge, C., Meek, J., Wellens, J. & Hooley, T. (2009). Facebook, social integration and informal learning at university: 'It is more for socialising and talking to friends about work than for actually doing work'. *Learning, Media and Technology*, 34(2), 141-155. <http://dx.doi.org/10.1080/17439880902923606>
- Mazman, S. G., & Usluel, Y. K. (2010). Modeling educational usage of Facebook. *Computers & Education*, 55(2), 444-453.
- McCarthy, J. (2010). Blended learning environments: Using social networking sites to enhance the first year experience. *Australasian journal of educational technology*, 26(6).
- Mullen, R., & Wedwick, L. (2008). Avoiding the digital abyss: Getting started in the classroom with YouTube, digital stories, and blogs. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas*, 82(2), 66-69.
- Naidu, S. (2005). *Learning & teaching with technology: Principles and practices*. Oxon, UK:
- Ogunlade, O. O., Joshua, E., & CHARLES, O. O. (2016). UNIVERSITY STAKEHOLDERS' ATTITUDE TOWARD UTILIZING E-TUTORING FOR DISTANCE LEARNING. *Ankara University Journal of Faculty of Educational Sciences (JFES)*, 49(2), 71-86.
- Oradini, F., & Saunders, G. (2008, February). The use of social networking by students and staff in higher education. In *iLearning forum* (pp. 4-5).
- Ouf, S., Nasr, M. & Helmy, Y. (2010). An enhanced e-learning ecosystem based on an integration between cloud computing and Web 2.0. In *IEEE International Symposium on Signal Processing and Information*

- Technology (ISSPIT), 2010, Helwan, Egypt.<http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5711721>
- Ozaji, E.D. (2003). Special education for General studies.jos: Deka publication
- Parker, Norwegian Ministry of Education and Research. (2009). White paper on teacher education “The teacher – the role and the education”. Report to the Storting .11 (2008-2009). Retrieved November 05, 2010, from <http://www.regjeringen.no/upload/KD/Vedlegg/stortingsmeldinger/TeacherEducationFactSheet.pdf>.
- Rambe, P. (2012). Critical discourse analysis of collaborative engagement in Facebook postings. Australasian Journal of Educational Technology, 28(2).
- Yusuf, M. O. (2005). Information and communication Technology and education analyzing the Nigeria National Policy for information Technology. International Education journal,6(3), 316-321. Retrieved September12,2013 from <http://files.eric.ed.gov/fulltext/EJ854985.pdf>