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**USERS' ACCEPTANCE OF WEB-BASED INFORMATION RESOURCES AT
REDEEMER'S UNIVERSITY, NIGERIA**

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ABSTRACT

Web based information resources is a powerful, dynamic and flexible information resource that fundamentally alter academic's research practices and interaction with information due to the additional avenues available to accessing, searching and retrieving scholarly information resources. This study accessed users' acceptance of web-based information resources at Redeemers University Nigeria in order to determine the factors that influence the use of web-based information resources by students and staff. The Unified Technology Acceptance and Utilisation Theory (UTAUT) was used to determine users' acceptance and utilisation of web-based information resources. The study adopted a survey design and a structured questionnaire was used as the research instrument to collect data from 364 respondents comprising students and academic staff of Redeemers University. Descriptive statistics frequency and percentage distribution was used to summarize the data while regression analysis and T-test was used to test the formulated hypotheses and tested at 0.05 levels of significance. Statistical Package for Social Sciences (SPSS) software was used to run the analyses. Finding showed that staff used web-based information resources more than students in Redeemers University. Among all the demographic factors (age, gender, status, college, level of student and destination of staff) only status and level of student significantly predicted the use of web-based information resources with positive relationship ($B = 0.354, p = 0.000$ and $B = 0.164, p = 0.009$) respectively. Also, all the variables in individual factors (confidence, self-efficacy, attitude and social influence.) had significant values with positive relationship on the use of web-based information resources except self-efficacy with positive relationship ($B = 0.034, p = 0.457$). Technological factors (performance and effort expectancy) had positive and significant relationship with the use of web-based information resources ($B = 0.363, p = 0.000, B = 0.468, p = 0.000$) respectively, and implementation factor (facilitating conditions) ($B = 0.711, p = 0.000$) had positive and significantly influence on the use of web-based information resources. In addition, the finding revealed a strong relationship between use of web-based information and acceptance ($B = 0.896, p = 0.000$).

It was recommended that more awareness should be created and training should be done often to educate students and staff on the use of web-based information resources in Redeemers University.

Key Words: Web-based information resources, Redeemers University, Users' acceptance, The Unified Technology Acceptance and Utilisation Theory (UTAUT).

Introduction

Modern university libraries and their associated information environment are the educational, information and social centers of the academic community, assisting in the formation of intelligent and information thinking students and staff of the university. Changes in the scientific and academic communication, the complexity of information systems, web formats of information flows and the diversity of media on the Internet promote new and modern requirements for academic libraries to disseminate information and knowledge (Savina, 2010). Today, the development of web-based information technologies inextricably linked with the growing role of the internet as a unified communication environment for information exchange and contacts with other entities of the information market, with different organizations and users especially in the university environment.

The tremendous growth and continuous development of technology has made the role of libraries become more responsive in making users of its information resources techno-savvy (Anjana, 2005). Technological developments have affected the formats and sources of information materials and how and where

to provide library information services. Libraries and their information resources have partially moved to the virtual world of the Internet. As a result, library users can access information resources from within and outside the physical library. In an effort to reach users accessing the library via their computers, mobile phones and others internet based technology, many libraries and library consortia are extending their services to include web-based information resources and services which are web based format. Information Technology now allows users to submit their queries to the library and access library information resources at anytime from any place in the world. As more libraries move towards providing services in a digital environment, the improved access to library collections and different web-based information resources is making the use of web-based information resources more realistic and more attractive. Traditional online services had transformed themselves into internet-based online services using web-based technologies.

According to Anwarul Islam and Panda (2007), the development of Information and Communication Technology (ICT) has radically impacted format of

information resources and university library services provided for students and staff to support their academic pursuit. The dramatic shifts in information flow and the sea change in digital formatted library materials enforce the appellation “library without walls”. Web-based information resources are a major force for changing the role of university libraries and information centers. In fact, the internet has broken new ground for finding and retrieving information and with it the end-user has found a way to become more information-independent (Anwarul Islam, 2007). The rapid and high growth in the world’s literature, curtailment in library budgets and advances in telecommunications and information technologies are progressing at a much faster pace. This now means that speedy and increasingly electronic access to information materials held elsewhere is becoming more usual, with acquisition, dissemination of information and relation policies based more on a “just in time” than “just in case” approach (Hopkins, 2000).

Redeemers University is one the private universities in Nigeria established in 2005, located in Redemption City in Ogun State south western Nigeria. Redeemers University has a population of

students estimated to be about 2,600 and about 650 staff (<http://www.run.edu.ng/>, 2012). The university has 3 colleges which include college of humanities, college of natural sciences and college of management sciences. There are 13 departments all together in the university that admits students to various disciplines of study. The university community has 4 major departments which are the Vice Chancellor office, library, registry and the bursary department. The university boasts of a functional Information Technology (IT) department that enhances the effective and efficient information services provides by the university library. The university library in collaboration with the IT department has embraced web-based information resources with availability of 24 hour internet accessibility, computer systems in the virtual library and provision of web-based subscription databases which include Elton B. Stephens Company (EBSCOHost), Access to Global Online Research in Agriculture (AGORA), Health Inter Network Access to Research Initiative (HINARI), Journal Storage (JSTOR), Online Access to Research in the Environment (OARE), BIOONE, BIOLINE, African Journals Online Library (AJOL), ALUKA, Royal Society of Chemistry, Plant Resources of

Tropical Africa (PROTA), Open Access Journals, Library of Thomson Learning and Bentham Journals.. The University library is fully automated and equipped with the basic and necessary Information and Communication Technologies (ICTs) facilities to facilitate the provision of web-based information resources to students and staff of the university to support their academics and research work.

Web based information resources is a powerful, dynamic and flexible information resource interface that fundamentally alter academic's research practices and interaction with information due to the additional avenues available to accessing, searching and retrieving scholarly information resources. There is a surge in global knowledge production and a massive expansion in scholarly research outputs. The growth in the availability of free and fees web-based information resources, and the ease of usage, has led to a phenomenal increase in the use of these information resources Naudé *et al.*, (2005). Today's students, researchers and scholars have virtually unlimited access to a greater number and variety of information resources than ever before (Noam 2009). This variety of information resources was made possible

with the emergence of web-based information resources with the aids of web-based technologies and the internet. Likewise elsewhere, Redeemers University Students and staff are expected to accept web-based information resources in order to harness its benefits to improve their academic performance. The level awareness about the important of web-based information resources to academic performance by students and staff in the university may be very important in their adoption of web-based information resources.

Several studies have shown that there are different facilitating conditions facilitate the acceptance of web based information resources in university environment. According to Shengli *et al* (2011), the significant impact of facilitating conditions on actual usage suggests that more people will use web-based information resources if given access to the internet and computers.

Acceptance of web-based information resources by students and staff of Redeemers University will be defined by many factors. For instance, the degrees to which students and staff of the university believe that using web-based information resources will help them improve their

academic performance. It was discovered by Schaper and Pervan (2004), that acceptance of web-based information resources can be studied in three contexts which are individual, technological and implementation context. The individual context of the research model encompasses computer confidence, computer self-efficacy and computer attitude. The technological context refers to the perception of a potential user of web-based information resources about the technology and this is made up of two determinants which are performance expectancy and effort expectancy. While the implementation context refers to the specific professional environment of the user as outlined in the research model includes the determinants of social influence, organizational facilitating conditions and compatibility.

Statement of the problem

Several studies have been carried out regarding the use of library information resources by students and staff of universities and other institutions of learning. However, most of the recent studies deal with the use of the Internet by students and other stakeholders of university community. Other studies focus on the use of electronic resources of the library (Applebee *et al.*, 2000; Teo,

2001; Adika, 2003; Uddin, 2003). It is well known that higher use of web-based information resources is accompanied by a decrease in visits to the physical library. Most readings will come from a relatively small percentage of the collection, but users will read from a greater variety of titles when they are made freely and easily accessible to them (Tenopir *et al.*, 2003). University students and staff are also more web technology savvy, in which they continue to use computers and the Internet to access web-based information resources. Sharifabadi (2008) found that there is movement towards a web-based environment as a result in a shift from the systematic one-to-one information flow of the past to a new model in which users and the providers of information are able to relate in a many-to-many, dynamic relationship. However, there might be a possibility that students and staff of Redeemers University may not have been using the several web-based information resources available effectively due to some factors.

It is therefore important to study the salient factors that affect the use of these web-based information resources towards acceptance by students and staff in the university environment. Little has been studied about user's acceptance of web-

based information resources by students and staff of universities especially in the Nigeria context. Therefore, it is imperative to carry out studies on the user's acceptance of web-based information resources in the universities setting in Nigeria, specifically Redeemers University.

Therefore, this study is carried out to investigate users' acceptance of web-based information resources identifying the various factors that affect its acceptance using the UTAUT theory of information system and understand how the user's acceptance of web-based information resources will create a new sustainable theory of quality information service delivery in the university environment which will increase the quality of information services provided to students and staff to support their academic success. The library is an information intensive section of the university community housing several format of information resources and web-based information resources as the latest present numerous benefits for its users in this information age.

Objectives of the study

The objective of this study is to:

1. Investigate the effect of demographic factors on the use of web-based information resources towards its acceptance by students and staff in Redeemers University.
2. Find out the web-based information resources available and use in Redeemer's University and how frequently they are used.
3. Investigate the challenges that affect the use of web-based information resources in Redeemers University.
4. Find out the effect of individual factors on the use of web-based information resources towards its acceptance.
5. Find out the effect of technological factors on the use of web-based information resources towards its acceptance.
6. Find out the effect of implementation factor on the use of web-based information resources towards its acceptance.

7. Determine the effect of use of web-based information resources on its acceptance by students and staff of Redeemers University.
8. Compare acceptance of web-based information resources among students and staff of Redeemers University.

Redeemers University Historical Background

Among private universities in Nigeria, Redeemer's University (RUN) was established out of the desire of the Redeemed Christian Church of God (RCCG) to create and impact university education in the country having realized the role university education can play in the social and technological development of a nation. This laudable thought started becoming a reality when in 1993; the Federal Government of Nigeria promulgated a decree allowing private individuals and organizations to establish private universities in the country (Redeemer's University 1st Convocation Programme, 2009). The parent body of this university monitored the development of tertiary education in the country with particular attention to the

inability of a high percentage of eligible candidates to secure admission to various programmes in the existing public universities in the country.

The proprietors not only thought of establishing a private university to provide for additional places to absorb the growing student population in the country but to also considerably improve upon the existing standard of teaching and learning in the universities. The proposal to establish Redeemer's University is therefore a noble effort towards producing the requisite high level person power required for the development of the nation. Having fulfilled the National Universities Commission (NUC) criteria for establishing a private university in the country, the Federal Government granted an operating license to the Redeemer's University on 7th January, 2005. The university took-off at the temporary site in the Redemption City in October, 2005 with three colleges, namely: College of Humanities, College of Management Sciences and College of Natural Sciences. Four hundred and seventy-three (473) pioneer students matriculated into the colleges to pursue bachelor degrees in various programmes in September, 2005 (Redeemer's University 1st Convocation Programme, 2009).

The university library took off along with the institution the same year. It is rich in current literature in the humanities, management sciences and natural sciences. It has a collection of over 20,000 volumes till date. The library also stocks current journals both print and electronic in all the disciplines which the university runs. The collection also includes non-print materials, slides, videos and transparencies. The library is fully automated, with facilities in the virtual library and all offices. Redeemers University administration demonstrated its commitment to the policy of an IT inclined institution by ensuring constant electricity power supply since frequency power outage has been the bane of fruitful information technology adoption in Nigeria (Daniel *et al*, 2003).

Literature Review

The main focus of this section is to review current and past researches on user's acceptance of web-based information resources in universities and others institute of learning. This will explain the ways in which user's accept web-based information resources in different parts of the world in the academic environment.

Studies on user's acceptance of web-based information resources

Several users' acceptance studies have been carried out by students, research scholars, and teachers of different institutes, colleges and universities all around the world, focusing on the use of e-resources. In a study at the Norris Medical Library at the University of Southern California compared the usage of a matched set of biomedical literature available to users in print and on the web. During the six-month study period, there were approximately 28,000 web-based viewings of full-text articles from the study subset, compared to only 1,800 uses of the corresponding print volumes. The results further revealed a remarkably similar usage curve in the print and web-based data, with just 20 per cent of titles accounting for nearly 60 per cent of usage in both formats (Morse and Clintworth, 2000). In a similar study, the librarians Clajus and Maier from the University and State Library in Koln carried out a survey among academic staff and found that only 16 per cent of respondents did not want to renounce the print version of the journal under any circumstances (Clajus and Maier, 2001). The biggest advantages of web-based information resources were full-text access from their own desktop (49 per cent) and the better currency of the web-based journal over print (Clajus and Maier, 2001).

Another user's acceptance study of web-based information resources was conducted at Stanford University in 2001 by interview. The project was conducted from November 2000 to March 2001 by researchers at the Institute for the Future. The result showed that the most significant current source of value from web-based journals was in scholars' ability to search them, and that online searching emphasizes the article as a relevant container of knowledge rather than the journal itself. In addition, there was not a single pattern of usage that predominated for web-based journals, and scholars used them for convenience (Stanford E-Journal User Study, 2001). A study by De Groote and Dorsch (2001) at the University of Illinois reported that print information resources usage had decreased significantly since the introduction of web-based information resources. This decrease occurred regardless of whether an information resource was available only in print or both web-based and in print. Interlibrary loan requests had also significantly decreased since the introduction of web-based information resources. The decrease in use of the print collection suggested that many patrons preferred to

access web-based information resources (De Groote and Dorsch, 2001).

In 2002, another user study was carried out, of scientists at the Rudjer Boskovic Institute (RBI) in Zagreb (Pazur, 2002). The results showed a high user's acceptance and use of web-based information resources. The RBI respondents stressed availability before the print version as the most important advantage of web-based information resources and the most important disadvantage is slow downloads. Very few respondents thought that web-based information resources had no disadvantages at all. Most of the respondents preferred the print version in the situation where both were available, but many used both versions equally – 32 per cent and 33 per cent (Pazur, 2002). In 2004 in the UK, a project designed to test a hypothesis that learning can be enhanced by promoting the use of web-based information resources was conducted by the Business School at University College Worcester (UCW). Analysis of the results indicated that effective collaboration between academic and library staff, the timely embedding of web-based information resources into the learning process and associating them with the assessment process can

significantly enhance the learning of students. The data indicated an encouraging increase in web-based information resources usage for assignment research (Colvin and Keene, 2004).

In this regard, Korobili *et al.* (2006) highlighted that, the great majority of the faculty of Technical Educational Institution (TEI), Thessaloniki, Greece use printed resources more than web-based information resources, but they also use web-based information resources quite frequently. Mostly used are books and printed journals. The results of this study further indicated that the use of web-based information resources is higher in the School of Business Administration and Economics among those who hold a PhD degree. Beard *et al.* (2007) in their study on, "The impact of web-based information resources at Bournemouth University 2004/2006" observes that the use of and enthusiasm for, web-based information resources is widespread amongst students and staff of Bournemouth University (UK). Kanungo (2007) highlighted the purposes and frequency of use of web-based information resources by the social scientists, and their methods of locating, accessing and using information on the

web at IGNOU. Mahamed (2007) unfolded the popularity of web-based information resources and services among the special library users of Kerala (India).

In another typical study, Ani and Ahiauzu (2008) found that there is a high level of developing web-based information resources in Nigerian University libraries through direct subscription for web-based information resources and web-based journal than conversion of information into electronic form in the library through computerization and digitization. Atakan (2008) in his study on, "An evaluation of the second survey on web-based databases usage at Ankara University Digital Library" found that the most preferred databases among the faculty members were Web of Science, Science Direct, and EBSCO. Swain and Panda (2009) in the process of evaluating librarians opinion found that, availability of some key web-based databases are exclusively confined to only a selected few business school libraries of Orissa (India) and the web-based information resources are well used compared with CD-ROM databases. However, the results of the present study may add another contribution to the corpus of available literature.

Research Methodology

Research has been defined as a process of inquiry, investigation, close scrutiny and discovery. It is an important tool for advancing knowledge. This section details the methodology used to empirically examine the determinants of user's acceptance of web-based information resources established in this work. It provides an overview of the methods undertaken in this paper to answer the research questions in this work and to test the hypothesis proposed. It focus on the research design adopted, the population of study, sampling procedure, data collection, measure of the questionnaire, reliability and validity of instrument and method of data analysis. The major focus of this section is to present the methodology that was used to conduct the study.

Research Design

This study adopted the social survey design approach. Survey design is a fact gathering expedition, which utilizes the most appropriate pattern in gathering first hand information from respondents through questionnaire or interview (Farber, 2002). According to Okwokwo (2010), the survey technique is the most commonly used research method. This is

due to five major reasons. First, it is designed to deal more directly with the nature of the respondents' thought, opinions and feeling and collect information on belief, attitudes and motive. Second, it is an effective tool, especially when the researcher does not require, or has little control over behavioral events. Third, it provides accurate mean of assessing information about the sample and enables the researcher to draw conclusions about generalizing the finding from a sample of responses to a population (Creswell, 2003). Forth, it is more concerned about causal research situations. Finally, it is considered useful because it is quick, inexpensive, efficient and can be administered to a large sample (Zikmund, 2003).

The survey method was adopted because data generated on the sample was used to deduce facts about students and staff in Redeemer's University. After the introduction, the second section focused on the research design. The third section pointed out the Study population and sampling procedure adopted while the fourth section presents the data collection and the fifth section is based on the structure of the questionnaire while the

sixth section discussed the method of data analysis.

Data Collection

In an attempt to obtain comprehensive and reliable information regarding users' acceptance of web-based information resources in Redeemers University by staff and students, questionnaire was used to elicit relevant information from the respondents. Questionnaire has been described as a data collection tool in which the respondent reads the survey questions and records his or her own responses without the present of the researcher (Okwokwo, 2010). Data was collected using a questionnaire because of the following reasons. A total of 414 copies of the questionnaire were distributed to students and academic staff of the university.

Study population and sampling procedures

Skinner and Taylor (2000) have defined the study population as the aggregate of elements from which the sample is actually selected. Olayinka *et al.* (2006) defined population as the totality of all elements, subjects, or members that possess a specified set of one or more common definite attributes. The population for this study is the entire

students and academic staff of Redeemers University.

Sample size and Sampling techniques

This answers the question: "how many respondents should I collect data from"? Preferably, the availability of all relevant elements (population) in every research data collection process and analysis signifies a strong validity of the research. But in most cases, it is not possible to use the entire population as a result of time constraints, logistics, unwillingness of respondents, knowledge of respondents and available resources. As a result, the research sample constitutes all the academic staff of the three colleges and students from 100 to 400 levels of Redeemers University.

Denga and Ali (1989) stated that although there is no single rule that can be applied to cases regarding the size of sample, nevertheless, statistically, a sample should be about fifteen to thirty percent of the population. To achieve this, 50% of the entire population of academic staff will be used and 15% of the entire population of students will be used. This means that the sample of staff and students from the entire population is 114 staff and 300 students. The stratified sampling was adopted to get the subset of

the population which is staff and students. The random sampling will be adopted to select the sufficient total number of respondents of 114 staff and 300 students to represent the entire population for this research work. All the available staff and students were considered for this study.

Data Collection

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Presentation and Interpretation of Results

Demographic factors of the Respondents

(Refer Table 1 Here)

Table 1 presents the demographic characteristics of the respondents. Respondents whose ages are below 20 are highest (42.9%) with those above 60 lowest (0.6%). The females are 53.7% compared to males who are 46.3%. Students and staff are 71.8 and 28.2 percent respectively. The 300 level students make 36.2% of the levels surveyed in this study while 100, 200 and 400 levels makes 9.4, 23.2 and 31.1 percent respectively. About 42% of the designated staff were lecturer 1 while graduate assistants make 3.0%.

Web-Based Information Resources and Use

Frequency Distribution of Use Web-Based Information Resources

(Refer Table 2 Here)

Table 2 shows the result for the web-based information resources use by students and staff which was measured by the frequency with which they use them. Many respondents responded to never use the information resources available. The result of the above table shows that that never use has the highest responses of the web-based information resources. EBSCOHOST (55.9%), AGORA (56.4), HINARI (52.3%), JSTOR (48.6%), OARE (72.6%), BIOONE (76.6%), BIOLINE (73.2%), AJOL (65.3%),

ALUKA, (77.4%) PROTA (78.2%), Royal Society of Chemistry (78.0%), Open Access Journals (44.4%), Library of Thompson Leaning (70.9%) and Bentham Journals (71.4%). However, Open Access Journals has the highest number of frequently use respondents with (18.9%).

Web-Based Information Resources and Use by Students

(Refer Table 3 Here)

Table 3 shows the result for the web-based information resources use by students which was measured by the frequency with which students use them. Many respondents responded to never use the information resources available. The result of the above table shows that that never use has the highest responses of the web-based information resources. EBSCOHOST (65.0%), AGORA (66.8), HINARI (62.8%), JSTOR (56.6%), OARE (72.5%), BIOONE (75.2%), BIOLINE (72.0%), AJOL (75.6%), ALUKA, (75.6%) PROTA (75.2%), Royal Society of Chemistry (75.4%), Open Access Journals (53.5%), Library of Thompson Leaning (71.5%) and Bentham Journals (72.0%). However, Open Access Journals has the highest number of frequently use students' respondent with (11.8%).

Web-Based Information Resources and Use by Staff

(Refer Table 4 Here)

Table 4 shows the result for the web-based information resources use by staff which was measured by the frequency with which staff use them. Many respondents responded to never use the information resources available. The result of the above table shows that that never use has the highest responses of the web-based information resources except Open Access Journals. EBSCOHOST (33.0%), AGORA (30.0%), HINARI (26.0%), JSTOR (28.3%), OARE (72.7%), BIOONE (80.0%), BIOLINE (76.0%), AJOL (54.0%), ALUKA, (82.0%) PROTA (86.0%), Royal Society of Chemistry (82.0%), Open Access Journals (21.0%), Library of Thompson Leaning (70.0%) and Bentham Journals (67.0%). However, Open Access Journals has the highest number of frequently use staff respondent with (37.0%).

Challenges of Using web-Based Information Resources

(Refer Table 5 Here)

Table 5 presents the constraints that are encountered on the way of effective use of web-based information resources by

students and staff. The main constraint that prevent respondents from effective use is 'It is difficult to read from the screen' (63.4%), followed by 'I am not able to use the web-based information resources properly' (55.3%) and 'Inadequate search skills to access web-based information resources (50.6%). Similarly, other challenges includes 'slow internet connection (29.0%) and 'Internet downtime discourages me to use web-based information' (48.1%).

Test of Hypotheses and Decision Rule

This section deals with the test of hypotheses formulated for the study. The pre-set level of significance for this study is 0.05. The Null hypothesis assumes that no significant association or relationship exists between the variables under consideration. On the other hand, the alternative hypothesis assumes that a significant association or relationship exists between the variables under consideration. On the whole, if the P-value (that is, the significance value of the test) exceeds the pre-set level of significance (which is 0.05), the null hypothesis will not be rejected and the alternative hypothesis will be rejected; but if the P-value is less than or equal to 0.05, this means that the null hypothesis

will be rejected and the alternative hypothesis will be accepted.

Hypothesis 1: There is no significant relationship between demographic factors and use of web-based information resources towards acceptance of web-based information resources

The table below presents the Analysis of variance results to test the relationship between users' characteristics and use of web-based information resources

(Refer Table 6 Here)

From the table above, the ANOVA results for hypothesis "There is no significant relationship between demographic factors and use of web-based information resources" is presented. The result showed that demographic factors which are age, gender, status, college, level of student and destination of staff were not significant as they were observed to affect the use of web-based information resources ($p > 0.05$). Hence, the null hypothesis is not rejected ($p > 0.05$), which implies that, there is no significant relationship between demographic factors and use of web-based information resources in Redeemer's University.

Regression Analysis between demographic factors and use of web-based information resources

(Refer Table 7 Here)

Adjusted R Square = 0.103

The regression analysis result presented in the table 7 above show the detail of each variable. The results show that only 10.3% of the variation in each of the demographic factors can be explained by differences in the use of web-based information resources (Adjusted R Square = 0.103). Age, gender and destination of staff has negative relationship (-0.078), (-.0328) and (-0.050) respectively, while status, college and level of student has positive relationship (0.354), (0.047) and (0.164) respectively. Age, gender and destination of staff result show negative slope (B = -0.210) (B=-0.224) (B=-0.101) respectively, while status, college and level of student has positive slope (2.391) (0.174) (0.530) respectively with the use of web-based information resources. At $p > 0.05$, only status and level of student have significant values of ($p=0.000$) and ($p=0.009$) respectively, while age, gender, college and destination of staff have significant value of ($p=0.425$) ($p=0.496$) ($p=0.368$) ($p=0.622$) respectively. This implies that of all the

demographic factors, only status and level of student are significant factors, others are not significant. However, status and level of student are significant factors but the null hypothesis will not be rejected at ($p > 0.05$). Therefore, demographic factors are not a significant predictor of the use of web-based information resources.

Hypothesis 2: There is no significant relationship between individual factors and use of web-based information resources towards acceptance of web-based information resources.

The table below presents the Analysis of variance results to test the relationship between individual factors and use of web-based information resource

(Refer Table 8 Here)

From the table above, the ANOVA results for hypothesis “There is no significant relationship between individual factors and use of web-based information resources” is presented. The result showed that individual factors which are Confidence, Self-efficacy, Attitude and social influence were significant as they were observed to affect the use of web-based information resources ($p > 0.05$). Hence, the null hypothesis is not rejected

($p > 0.05$), which implies that, there is no significant relationship between individual factors and use of web-based information resources in Redeemer's University.

Regression analysis between individual factors and use of web-based information resource

(Refer Table 9 Here)

The table 9 above shows regression analysis of individual factors and use of web-based information resources. The results showed that 48.4% of the variation in individual factors can be explained by differences in the use of web-based information resources (Adjusted R Square = 0.484). The individual factors used are confidence, self-efficacy, attitude and social influence. However, the result showed that confidence, attitude and social influence are significant at $p < 0.05$ with positive relationship (0.175) (0.403) (0.254) and slope (0.181) (0.189) (0.142) respectively. While self-efficacy had a positive relationship (0.034) with use of web-based information resources which is not significant at the threshold $p < 0.05$.

Hypothesis 3: There is no significant relationship between technological factors and use of web-based

information resources towards acceptance of web-based information resources.

The below table presents the Analysis of variance results to test the relationship between technological factors and use of web-based information resource (Refer Table 10 Here)

From the table 10 above, the ANOVA results for hypothesis "There is no significant relationship between technological factors and use of web-based information resources" is presented. The result showed that technological factors which are performance expectancy and effort expectancy were significant as they were observed to affect the use of web-based information resources ($p > 0.05$). Hence, the null hypothesis is not rejected ($p > 0.05$), which implies that, there is no significant relationship between individual factors and use of web-based information resources in Redeemer's University.

Regression analysis between individual factors and use of web-based information resource

(Refer Table 11 Here)

The technological factors used are performance expectancy and effort

expectancy. The result in the table 11 above shows that 58.4% of the variation in technological factors can be explained by differences in the use of web-based information resources (Adjusted R Square = 0.582). Both performance expectancy and effort expectancy have positive relationship (0.363) (0.468) respectively. At $p > 0.05$, performance expectancy and effort expectancy show positive and significant slope ($B = 0.185$, $p = 0.000$ and $B = 0.268$, $p = 0.000$) respectively with the use of web-based information resources. This means that a unit increase in performance expectancy and effort expectancy result in only 18.5% and 26.8% increase in the use of web-based information resources. The null hypothesis will be rejected at ($p > 0.05$). Therefore, technological factors are a significant predictor of the use of web-based information resources.

Hypothesis 4: There is no significant relationship between implementation factor and use of web-based information resources towards acceptance of web-based information resources.

The table below presents the results of regression analysis to test the relationship

between implementation factor and use of web-based information resource

(Refer Table 12 Here)

The implementation factor used is facilitating condition. Table 12 shows the results that 50.6% of the variation in Implementation factor can be explained by differences in the use of web-based information resources (Adjusted R Square = 0.506) with positive relationship (0.711). At $p > 0.05$, the result shows positive and significant slope ($B = 0.561$, $p = 0.000$) with the use of web-based information resources. This means that a unit increase in facilitating condition results in 56.1% increase in the use of web-based information resources. The null hypothesis will be rejected at ($p > 0.05$). Therefore, Implementation factors are a significant predictor of the use of web-based information resources.

Hypothesis 5: There is no significant relationship between the use of web-based information resources and acceptance of web-based information resources.

(Refer Table 13 Here)

The table below presents the results of regression analysis to test the relationship between the use of web-based information resource and its acceptance

Table 13 shows the results that 80.1% of the variation in use of web-based information resources can be explained by differences in the acceptance of web-based information resources (Adjusted R Square = 0.801) with positive relationship (0.896). At $p > 0.05$, the result shows positive and significant slope ($B = 0.355$, $p = 0.000$) with acceptance of web-based information resources. This means that a unit increase in the use of web-based information resources results in 35.5% increase in the acceptance of web-based information resources. The null hypothesis will be rejected at ($p > 0.05$). Therefore, use of web-based information resources is a significant predictor of the acceptance of web-based information resources in Redeemers University.

Hypothesis 6: There is no significant difference in the use of web-based information resources among students and staff of Redeemer's university.

T-test analysis of differences in the use of web-based information resources by students and staff

(Refer Table 14 Here)

Independent t-test was conducted to test the difference in the use of web-based information resources among students and staff. The table 14 shows that the

mean and the standard deviation (10.2900 \pm 2.3808) of staff were higher than that of students (8.2262 \pm 3.09099). These revealed a t-value of -6.002 at df 350 which is less than p-value of 0.000 at 0.05 level of significance. By this result, it shows that statistical significant differences exist in the use of web-based information resources among students and staff since the mean value of staff is greater than that of students. This means that staff use web-based information resources more than students. The null hypothesis will be rejected at ($p > 0.05$). Therefore, there is significant difference in the use of web-based information resources among students and staff in Redeemer's University.

Summary of Results from Test of Hypotheses

The table below shows a summary of the values of the hypotheses test, their significant values and decisions on the null hypotheses.

(Refer Table 15 Here)

It can be observed from table 15 above that among all the demographic factors, only status and level of student had significant relationship with the use of web-based information resources. Age, gender, college and designation of staff had no significant effect on the use of

web-based information resources. Also, among all the individual factors, only user's self-efficacy does not have significant relationship with the use of web-based information resources while all others individual factors have significant relationship and effect of the use of web-based information resources. Furthermore, the two technological factors which are performance expectancy and effort expectancy had significant relationship with the use of web-based information resources in Redeemers University. Not only that, there is also significant relationship between implementation factors (facilitating conditions) and use of web-based information resources. The result also showed that there is significant relationship between the use of web-based information resources and acceptance of web-based information resources. Finally, there is a significant difference in the use of web-based information resources among students and staff of Redeemers University.

Discussion of Findings

Demographic factors and use of web-based information resources

The relationship between demographic factors and use of web-based information resources by students and staff of

Redeemers University show positive correlation, which was not significant. The result obtained from this study reveals that use of web-based information resources by students and staff is not influenced by their age, gender, college, and designation of staff. Gender and age are known to have various impacts on technology acceptance and usage. This research work disagreed with the finding of Rana, (2009) and Osawari, (2011) that male use technological more than their female counterpart because more female use web-based information resources than male. This is probably as a result that there are more female students and staff in Redeemers University. This also disagreed with Freeman, Carroll, and Hannan (2003), who stated that there were more males than females.

In a similar research conducted by Dhanavandan in 2008, the result shown that there is no significant relationship between gender and age and the use of ICT, although there is some variation. This finding disagrees with the studies by Manda and Mulkangara (2007), Gender analysis of electronic information resources use: A case of the university of Dares Salaam Tanzania and Ford, Miller, and Moss (2001), The role of individual difference in Internet searching: An

empirical study, who reported that male students use web-based information resources more than female students and that female students find more difficulty in finding information online than males.

However, status (students or staff) and level of student had highly significant relationship and effect on the use of web-based information resources in Redeemers University. This is so because observation showed that staff use web-based resources than students. This may be as a result of staff do more academic research works and assignment more than students among other reasons. Also level of student had significant relationship and effect on the use of web-based information resource. This may be so because the usage of web-based information resources is greatly determine by the search knowledge and experience of users, in agreement with this fact, most of the students that use web-based information resources are from higher level meaning that level of students is a determinant of use of web-based information resource in Redeemers University.

This study also deviated from the study of Goktalaya and Ozdileka (2010) that demographic factors have significant

influence on participants' perceptions about Web 2.0 technologies acceptance.

Individual factors and use of web-based information resources

The individual factors refer to confidence of users in web-based information resources, self efficacy of users, personal attitude to the use of web-based information resources and social influence. It can be deduced from the result that there is positive correlation between individual factors and the use of web-based information resources, which was significant. This means that the individual factors motivated students and staff individually to the use of web-based information resources. The result also shows that confidence, attitude and social influence affect the use of web-based information resources but self efficacy did not influence the use of web-based information resources. This agreed with the study of Goktalaya and Ozdileka (2010) to investigate the pre-service teachers' perceptions about Web 2.0 technologies in their learning process and their acceptance levels and attitudes towards these tools. The results showed that participants' attitude influence acceptance and willingness to use these technologies.

In a related study, this study agreed with the findings of Wills *et al.* (2008), it was discovered that social influence plays a greater role in electronic medical records (EMR) adoption. This study consistent with the study conducted by Hong *et al.* (2002) found positive relationship between individual factors and the use of web-based information resources.

This study also agreed with previous studies that suggested that social influence is a significant predictor of behavioral intention to use mobile banking (Zhou *et al.*, 2010) and web-based learning (Chiu and Wang, 2008). Kulviwat *et al.* (2009) found that social influence has a positive effect on consumers' intention to adopt high tech innovations which agreed with this study. In agreement with this study, attitude towards the use computers was found to play a critical role in the user's technology acceptance decisions (Chau & Hu 2002b; Hu *et al.* 1999).

Technological factors (performance and effort expectancy) and use of web-based information resources

An interesting finding in this study was on the technological factors that affects use and acceptance of web-based information resources in Redeemers University. The technological factors of web-based information resources refer to effort expectancy and performance expectancy. The findings from the technological factors revealed that use of web-based information resources by students and staff was influenced by performance expectancy and effort expectancy of web-based information resources. There is positive relationship. Therefore, technological factors influence the use of web-based information resources by students and staff in Redeemers University. This agrees with the findings of Wills *et al.* (2008), it was discovered that performance expectancy and effort expectancy plays a greater role in electronic medical records (EMR) adoption, particularly among women. Also, the proposition of the UTAUT that performance expectancy and effort expectancy were significant in the adoption of e-government services in Kuwait. Al-Awadhi and Morris, (2008), was confirmed as technological factors gave a positive and significant correlation with the use of web-based information

resources by students and staff in Redeemers University.

In a related work, the discovery of Timothy (n.d) that performance expectancy is significantly related to acceptance agreed with this study. This study also agree with proposed work of Zhou *et al.* (2010), a mobile banking user adoption model and based on UTAUT model reported that performance expectancy had important impacts on user adoption. The result of Kijisanayotin *et al.* (2009) found that effort expectancy is an important predictor of accepting web-based information resources which agreed with the finding of this study. The finding of this work also corroborates with the finding of Koo and Choi (2010) that effort expectancy has a positive effect on Korean users' intention to use knowledge search services. Gupta et al. (2008) indicated that effort expectancy positively affects the use of ICT in a government organization, this also support the finding of this research work. In another empirical study carried out by Chen and Barnes (2007) the result shown that performance expectancy significantly affects user adaptation intentions. In a related development, Tan and Teo (2000) suggested that performance expectancy is an important

factor in determining adaptation of innovations. This is as of the fact that greater the performance expectancy of using web-based information resources, the more likely web-based information resources will be adopted. The result of the finding of this work also agreed with the suggestion of Chiu and Wang (2008) that performance expectancy has a positive influence and significant effect on continuous intention to use web-based learning.

However, the result of this study does not agree with Davis (1989) believe about effort expectancy to have a significant influence on technology acceptance as well as perceptions of usefulness but it corroborates Yi and Hwang's (2003) finding that ease of use had no significant effect on usefulness over and above enjoyment (benefit). This indicated that benefit was a dominant determinant of usefulness

Implementation factors (facilitating conditions) and use of web-based information resources

Results showed that there was a significant relationship between facilitating conditions and the use of web-based information resources by students and staff in Redeemers University. This agrees with the finding of Al-Awadhi and Morris (2008) that facilitating conditions were significant in the adoption of e-government services in Kuwait. The framework of Cheong et al. (2004) found that facilitating conditions have a positive influence on the intention to use credit cards. This corroborated with the work of Hung et al. (2006), which indicated that facilitating conditions are an important determinant of users' acceptance of e-government services. It was noted that availability of power, internet and others facilities to enhance web-based information resources use in Redeemers University. Facilitating condition is a very important of this study. This is because facilitating conditions are an important determinant of user's acceptance of web-based information resources Hung et al. (2006).

Results from the UTAUT validation suggest that FC was significant in both voluntary and mandatory settings. Also, Facilitating conditions have been found to have a positive impact on behavioral intention in a number of previous studies

(e.g. Zhou et al., 2010). This study agreed with the finding of Cheong et al. (2004) that facilitating conditions have a positive influence and significant effect on the intention to use credit cards. Considering the fact that a system will not be used if a user lacks the necessary knowledge and option to engage in the activity, it is therefore necessary for Redeemers University to maximally facilitate and promote the use of web-based information resources among students and staff of the institution by ensuring the provision of up-to-date information to create awareness on web-based information resources, management support, users training and the provision of other logistic supports.

Acceptance of web-based information resources

User acceptance is said to be the confirmation, through testing, that the delivered system meets all requirements, functions according to design parameters, and satisfies all business, technical, and management stakeholders. Studies had seen users' acceptance has been an adequate indicator for the overall success of a system (Davis et al. (1992) and Elske et al. (2003). The result revealed that there is a strong significant relationship

between use of web-based information resources and the acceptance of web-based information resources in Redeemers University. The study further revealed that majority of the students and staff prefers using web-based information resources. The finding also revealed further that the acceptance of web-based information resources is based on the benefits derived from its use by students and staff of Redeemers University. However, to improve on the level of acceptance and usage of web-based information resources at Redeemers University and other institutions of learning, more access to web-based information resources should be provided, increase in awareness and regular intensive training should be provided for students and staff of Redeemers University.

Difference in the Use of Web-Based Information Resources by Students and Staff

This study determined that there was significant difference in the use of web-based information resources among students and staff in Redeemers University. This agreed with the finding of Clajus and Maier (2001) that academic staff use web-based information

resources more than students of University of Koln. In another hypothesis tested by Colvin and Keene (2004) shown that collaborations between academic staff and library staff of Business School at University College Worcester (UCW) enhance the use of web-based information resource by academic staff more than students. Timely embedding of web-based information resources into the learning process and associating them with the assessment process can significantly enhance the learning of students. The data indicated an encouraging increase in web-based information resources usage for assignment research (Colvin and Keene, 2004). This is also correct because academic staff do more research work than students.

Implications of Findings

The study showed that majority of the students and staff have never use web-based information resources and few of them frequently use web-based information resources in Redeemers University. Respondents that use web-based information resources frequently used the open access journal most. This is probably because adequate awareness

and significant training has not been provided for users.

The study showed that most of the respondent indicated that these factors as the major challenges hindering the use of web-based information resources at Redeemers University: It is difficult to read from the screen, I am not able to use the web-based information resources properly and inadequate search skills to access web-based information resources. All these challenges arise as a result of lack of training of users. The finding of this study agreed with Sethi and Panda (2012) that lack of training is the major challenges that prevent users from effective use of web-based information resources. However, the implication of these challenges has show that more awareness and more training need to be given to students and staff on the use of web-based information resources in Redeemers University.

This study suggests the following implications for higher institutions especially Redeemers University to improve the quality of training giving to students and staff to use web-based information resources effectively. Also, more awareness should be giving to students and staff on the various available

web-based information resources in Redeemers University to enhance maximum utilization and usage. As revealed from the findings, it can be seen that there is no relationship between the demographic factors of respondents and the use of web-based information resources. However, status and level of student had significant relationship with the use of web-based information resources. This implies that age, gender, college, and designation of staff do not influence the use of web-based information resources in Redeemers University. This means that if more regular training is organize to educate uses and more awareness is created, there will be improvement in the use of web-based information resources by students and staff.

Individual factors had positive relationship with use of web-based information resources except self-efficacy. This means confidence, attitude and social influence influenced the use of web-based information resources. This implies that students and staff of Redeemers University have confidence in the use of web-based information resources; display positive attitude toward the use of web-based information resources and are influence by social

conditions to use web-based information resources but are not highly efficient and effective in the use of web-based information resources, this may be as a result of lack of search skills among students and staff. This finding agreed with Wills *et. al.* (2008). This shows that students and staff of Redeemers University has all the necessary requirements to use web-based information resources infectively. This implies that the provision of necessary awareness on web-based information resources and quality and periodic user's education to increase their search skills will facilitate maximal use of web-based information resources in Redeemers University. To improve awareness, this can be done through train the trainer workshop and other available methods.

As reveal from the study there is no doubt that technology factors influence the use of web-based information resources in Redeemers University. As shown in the study, technology factors has strong influence on students and staff on the use of web-based information resources, hence there has been a substantial growth in technology factors literatures. Koo and Choi (2010) found that technology factors have a positive effect on Korean users' intention to use knowledge search

services. A study by Kijisanayotin *et al.* (2009) also found that technology factors important predictor of accepting web-based information resources. More also, the finding from this study also corroborate the assertions made by Chiu and Wang (2008) suggested that technology factors has a positive influence on the use of web-based information resources.

The theoretical model was constructed by investigating different technology acceptance studies and the definition of application usability. Particularly, the factors presented in these models were discussed and chosen to the revised model based on literature and also considering the specific circumstance of the case application's of web-based information resources environment. In the theoretical part of this work, the UTAUT theory by Venkatesh *et al.* (2002) was used. The goal of UTAUT was to unify more theories and also created a consistent picture of the determinants affecting used acceptance. The UTAUT consist of four major constructs which are: individual, technological and implementation factors. It also adds up to the model even more factors and also some moderators of key relationships: gender, age experience

and voluntariness. The main theoretical implication of this study was the constructed UTAUT model which is aimed to predicting the acceptance of web-based information resources. According to the model, there are three determining factors that were detected based on literature, these are: individual, technology and implementation factors. Furthermore, the moderating factors that influence the three determining factors described above were found: age, gender, status, college, level of student and designation of staff. This model is tested in the empirical part of this study.

This finding can aid information science researchers, library professionals, educational professionals, institution of learning and users in providing appropriate mechanisms and insights on web-based information resources. Redeemers University and other institution of learning can take advantage of this to improve the use of web-based information resources by students and staff.

The practical implication of users' acceptance of web-based information resources by students and staff is that the use of web-based information should be made mandatory for both students and

staff of Redeemers University. This can be done by inculcating the use of web-based information resources into the curriculum of the use of library by students and also ensure high level of usage of web-based information resources by staff. This can be used to promote the use of web-based information resources in Redeemers University and other institute of learning.

Summary, Conclusion and Recommendations

The study investigated users' acceptance of web-based information resources by students and staff of Redeemers University. The factors that influence the use of web-based information resources were investigated. These factors includes: demographic (age, gender, status, college, level of student and destination of staff), individual (confidence, self-efficacy, attitude and social influence), technological (performance and effort expectancy) and implementation (facilitating conditions) factors. In carrying out the study, the researcher made use of a self structured questionnaire which yielded enough data on different factors on use of web-based information resources by students and staff towards its acceptance. Data was collected from three hundred and fifty-

four respondents comprising students and staff of Redeemers University. The data collected was coded into SPSS in order to facilitate the ease of analysis of data. Constructs were computed to minimize the variables to measure the factors. Descriptive statistics was applied to the dataset while regression analysis and t-test was used to test the formulated hypotheses.

In addition, the finding revealed that web-based information resources such as; Elton B. Stephens Company (EBSCOHost), Access to Global Online Research in Agriculture (AGORA), Health Inter Network Access to Research Initiative (HINARI), Journal Storage (JSTOR), Online Access to Research in the Environment (OARE), BIOONE, BIOLINE, African Journals Online Library (AJOL), ALUKA, Royal Society of Chemistry, Plant Resources of Tropical Africa (PROTA), Open Access Journals, Library of Thomson Learning and Bentham Journals were available in Redeemers University. The findings from this study showed that availability of web-based information to students and staff influences the use but there was low use of web-based information resources by students and staff in Redeemers University. Furthermore, the study

observed that difficulty to read from the screen, inability to use the web-based information resources properly, inadequate search skills to access web-based information resources, slow internet connection and Internet downtime discourage were the major challenges facing the use of web-based information resources at Redeemers University.

The study further showed that only status and level of students among all the demographic factors had significant influence on the use of web-based information resources. In addition, all the individual factors had significant relationship with the use of web-based information resources except self-efficacy. Technology factors and implementation factors had significant influence on the use of web-based information resources. Also, use of web-based information resources had significant relationship with acceptance of web-based information resources. The result of this study also shows that staff use web-based information resources more than students. Therefore, more awareness on web-based information resources, regular users training and education on effective and efficient use of web-based information resources, and

provision of access to web-based information resources should be the major focus of Redeemers University authority while encouraging students and staff with other facilities to enhance use of web-based information resources.

Conclusion

This study concluded that demographic factors did not predict the use of web-based information resources except status and level of students in Redeemers University. This implies that age, sex, college, department and designation of staff did not affect the use of web-based information resources in Redeemers University. Furthermore, only self-efficacy did not significant among all the individual factors. Technological and implementation factors are strong predictors of use of web-based information resources towards its acceptance. This implies that confidence, attitude, social influence, performance expectancy, effort expectancy and facilitating conditions influenced the use of web-based information resources. Also, use of web-based information resources affects its acceptance. In addition, there is significant difference in the use of web-based information resources among students and staff. This showed that staff used web-based

information resources more than students in Redeemers University. Therefore, effective, efficient and maximum utilization of web-based information resources should be the major focus to Redeemers University. This can be achieved by increase awareness and provision of intensive training for students and staff.

Conclusively, to increase students and staff use of web-based information resources, Redeemers University has to provide access to web-based information resources, increase awareness and provide regular intensive training for students and staff of Redeemers University.

Recommendations

Based on the findings from this study, the following recommendations are made:

1. Redeemers University management through the library should ensure the provision of access to full-text web-based information resources. Access to full-text web-based information resources is important to encourage the use of web-based information resources by students and staff.

2. Internet speed and bandwidth should be increased to create fast access to of web-based information resources. This is because high speed of internet is important to efficient and effective use of web-based information resources.
 3. Redeemers University should create more awareness to stimulate students and staff interest in the use of web-based information resources.
 4. Redeemers University through the library should hold more user education training to educate staff and students on how to effectively search and exploit web-based information resources.
 5. Wireless internet services should be made available to students and staff to enhance access to web-based information resources anytime and anywhere within Redeemers University environment.
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List of Tables:

Table 1: Demographic Profile of Respondents

Variable	Measure	Frequency	Percentage
Age	Less than 20	152	42.9
	21-30	107	30.2
	31-40	46	13.0
	41-50	40	11.3
	51-60	7	2.0
	Above 60	2	0.6
Gender	Male	164	46.3
	Female	190	53.7
Status	Student	254	71.8
	Staff	100	28.2
College	Management Science	212	59.9
	Humanities	64	18.1

	Natural Sciences	78	22.0
Level of Student	100	24	9.4
	200	59	23.2
	300	92	36.2
	400	79	31.1
Designation of Staff	Graduate Assistance	3	3.0
	Assistant Lecturer	19	19.0
	Lecturer I	42	42.0
	Lecturer II	20	20.0
	Senior Lecturer	15	15.0
	Professor	1	1.0

Table 2: Frequency Distribution of Use Web-Based Information Resources

Web-Based Resources	Never		Seldom		Occasionally		Frequently	
	N	Percent	N	Percent	N	Percent	n	Percent
EBSCOHOST	198	55.9	51	14.4	70	19.8	35	9.9
AGORA	199	56.4	65	18.4	61	17.3	28	7.9
HINARI	185	52.3	58	16.4	65	18.4	45	12.7
JSTOR	170	48.6	61	17.4	72	20.6	47	13.4
OARE	254	72.6	41	11.7	36	10.3	19	5.4
BIOONE	271	76.6	35	9.9	30	8.5	18	5.1
BIOLINE	259	73.2	39	11.0	34	9.6	22	6.2
AJOL	231	65.3	53	15.0	45	12.7	25	7.1
ALUKA	274	77.4	32	9.0	30	8.5	18	5.1
PROTA	271	78.2	28	7.9	29	8.2	20	5.6
Royal Society of Chemistry	276	78.0	31	8.8	23	6.5	24	6.8

ELK ASIA PACIFIC JOURNAL OF LIBRARY MANAGEMENT AND INFORMATION TECHNOLOGY

ISSN (Online): 2394-9384; Volume 2 Issue 1 (2015)

Open Access Journals	157	44.4	57	16.1	73	20.6	67	18.9
Library of Thompson Learning	251	70.9	32	9.1	43	12.2	27	8.6
Bentham Journals	252	71.4	34	9.6	35	9.9	32	9.1

Table 3 Frequency Distribution of Use of Web-Based Information Resources by Students

Web-Based Resources	Never		Seldom		Occasionally		Frequently	
	N	Percentage	N	Percent	n	Percentage	n	Percentage
EBSCOHOST	165	65.0	30	11.8	35	13.8	24	9.4
AGORA	196	66.8	42	16.6	28	11.1	14	5.5
HINARI	159	62.8	41	16.2	31	12.3	22	8.7
JSTOR	142	56.6	42	16.7	41	16.3	26	10.4
OARE	182	72.5	32	12.7	32	9.2	14	5.6
BIOONE	191	75.2	26	10.2	21	8.3	16	6.3
BIOLINE	183	72.0	31	12.2	23	9.1	17	6.7
AJOL	177	75.6	37	14.6	24	9.4	16	6.3
ALUKA	192	75.6	22	8.7	26	10.2	14	5.5
PROTA	191	75.2	22	8.7	23	9.1	18	7.1

Royal Society of Chemistry	194	75.4	24	9.4	17	6.7	19	7.5
Open Access Journals	136	53.5	39	15.4	49	19.3	30	11.8
Library of Thompson Learning	181	71.5	23	9.1	25	9.9	24	9.5
Bentham Journals	183	72.0	26	10.2	20	7.9	24	9.4

Table 4: Frequency Distribution of Use of Web-Based Information Resources by Staff

Web-Based Resources	Never		Seldom		Occasionally		Frequently	
	n	Percent	N	Percent	n	Percent	n	Percent
EBSCOHOST	33	33.0	21	21.0	35	35.0	11	11.0
AGORA	30	30.0	23	23.0	33	33.0	23	23.0
HINARI	26	26.0	17	17.0	34	34.0	23	23.0
JSTOR	28	28.3	19	19.2	31	31.3	21	21.2
OARE	72	72.7	9	9.1	13	13.1	5	5.1
BIOONE	80	80.0	9	9.0	9	9.0	2	2.0
BIOLINE	76	76.0	8	8.0	11	11.0	5	5.0
AJOL	54	54.0	16	16.0	21	21.0	9	9.0
ALUKA	82	82.0	10	10.0	4	4.0	4	4.0
PROTA	86	86.0	6	6.0	6	6.0	2	2.0
Royal Society of Chemistry	82	82.0	7	7.0	6	6.0	5	5.0
Open Access Journals	21	21.0	18	18.0	24	24.0	37	37.0
Library of Thompson Learning	70	70.0	9	9.0	18	18.3	3	3.0
Bentham Journals	67	67.0	8	8.0	15	15.0	8	8.0

Table 5: Frequency Distribution of Challenges faced when using Web-Based Information Resources

Challenges of Web-Based Information	Total Disagree		Total Agree		Do not know	
	n	Percent	N	Percent	N	Percent
I am not able to use the web-based information resources properly	12	34.5	19	55.3	36	10.2
The information I need are not in use or are not available	19	55.9	11	33.7	37	10.4
Technical problems	17	49.1	14	39.7	40	11.2
It is difficult to read from the screen	10	28.6	22	63.4	29	8.0
Internet downtime discourages me to use web-based information resources	14	42.1	17	48.1	35	9.8
Slow internet connection	23	65.4	10	29.0	20	5.6
Inadequate search skills to access web-based information resources	14	40.4	17	50.6	32	9.1
Lack of full text subscription databases	16	45.7	14	41.2	46	13.1
Lack power supply to enhance access	21	59.4	10	30.8	35	9.8

Table 6: ANOVA results to test the relationship between users' characteristics and use of web-based information resources

ANOVA ^b					
Model	Sum of Squares	Df	Mean Square	F	Sig.

1	Regressi on	88.434	6	23.998	2.959	0.525
	Residual	2317.107	344	14.079		
	Total	2405.541	350			
a. Predictors: (Constant), Age, gender, status, college, level of student and destination of staff						
b. Dependent Variable: USE OF WEB-BASED INFORMATION RESOURCES						

Table 7: Regression Analysis between demographic factors and use of web-based information resources

S/N	Independent Variables: Demographic Factors	Use of web-based Information Resources		
		B	Beta	Sig.
1	Age	-0.210	-0.078	0.425
2	Gender	-0.224	-.0328	0.496
3	Status	2.391	0.354	0.000
4	College	0.174	0.047	0.368
5	Level of Student	0.530	0.164	0.009
6	Destination of Staff	-0.101	-0.050	0.622

Adjusted R Square = 0.103

Table 8: ANOVA results to test the relationship between individual factors and use of web-based information resource

ANOVA ^b						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1573.188	4	393.297	81.250	0.000

	Residual	1636.112	338	4.841		
	Total	3209.300	342			
a. Predictors: (Constant), Confidence, Self-efficacy, Attitude and social influence						
b. Dependent Variable: USE OF WEB-BASED INFORMATION RESOURCES						

Table 9: Regression analysis between individual factors and use of web-based information resource

S/N	Independent Variable Individual Factors	Use of web-based Information Resources		
		B	Beta	Sig.
1	Confidence	0.181	0.175	0.000
2	Self-efficacy	0.021	0.034	0.457
3	Attitude	0.189	0.403	0.000
4	Social influence	0.142	0.254	0.000

Adjusted R Square = 0.484

Table 10: ANOVA results to test the relationship between technological factors and use of web-based information resource

ANOVA ^b						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1908.463	2	954.218	244.850	0.000
	Residual	1344.518	345	3.897		
	Total	3252.954	347			
a. Predictors: (Constant), Performance expectancy and effort expectancy						
b. Dependent Variable: USE OF WEB-BASED INFORMATION RESOURCES						

Table 11: Regression analysis between individual factors and use of web-based information resource

S/N	Independent Variable Technological Factors	Use of web-based Information Resources		
		B	Beta	Sig.
1	Performance Expectancy	0.185	0.363	0.000
2	Effort Expectancy	0.268	0.468	0.000

Adjusted R Square = 0.584

Table 12: Results of regression analysis to test the relationship between implementation factor and use of web-based information resource

S/N	Independent Variable Implementation Factor	Use of web-based Information Resources		
		B	Beta	Sig.
1	Facilitating Condition	0.561	0.711	0.000

Adjusted R Square = 0.504

Table 13: Results of regression analysis to test the relationship between the use of web-based information resource and its acceptance

S/N	Independent Variable	Acceptance of Web-Based Information Resources		
		B	Beta	Sig.
1	Use of Web-Based Information Resources	0.355	0.896	0.000

Adjusted R Square = 0.801

Table 14: T-test analysis of differences in the use of web-based information resources by students and staff

Use of Web-Based Information Resources	N	mean	S.D	t-value	Df	sig

Students	252	8.2262	3.0909 9	- 6.002	350	0.00 0
Staff	100	10.290 0	2.3808			

Table 15: Summary of Values

Hypotheses	Beta	Significant Values	Decision
Demographic Factors			
There is no significant relationship between age and use of web-based information resources.	- 0.078	0.425	Do not reject
There is no significant relationship between gender and use of web-based information resources.	-	0.496	Do not reject
*There is no significant relationship between status and use of web-based information resources.	0.328	0.000**	reject
There is no significant relationship between college and use of web-based information resources.	0.354	0.368	Reject

* There is no significant relationship between level of student and use of web-based information resources.	0.047	0.009**	Do not reject
There is no significant relationship between destination of staff and use of web-based information resources	0.164	0.622	Reject
	-		
	0.050		Do not reject
Individual Factors			
*There is no significant relationship between users' confidence and use of web-based information resources.	0.175	0.000**	Reject
There is no significant relationship between users' self-efficacy and use of web-based information resources.	0.034	0.457	Do not reject
*There is no significant relationship between users' attitude and use of web-based information resources.	0.403	0.000**	Reject
*There is no significant relationship between social influence and use of web-based information resources	0.254	0.000**	Reject
Technological Factors			
*There is no significant relationship between performance expectancy and use of web-based information resources.	0.363	0.000**	Reject
*There is no significant relationship between effort expectancy and use of web-based information resources.	0.468	0.000**	Reject
Implementation Factor			
*There is no significant relationship between facilitating condition and use of web-based information resources.	0.711	0.000**	Reject
*There is no significant relationship between the use of web-based information resources and acceptance of web-based information resources.	0.896	0.000**	Reject
*There is no significant difference in the use of web-based information resources among students and staff of Redeemers University		0.000**	Reject