OWENA JOURNAL OF LIBRARY AND INFORMATION SCIENCE [OJOLIS]
VOL 9, NO. 1 (Jan-Jun,2022) (ISSN: 0189-3092). Email: ondonlaojolis@gmail.com
A Journal of the Nigerian Library Association Ondo State Chapter. Akure.

# INFLUENCE OF UNDERGRADUATES' LEARNING SKILLS ON ELECTRONIC RESOURCES USAGE IN PRIVATE UNIVERSITIES IN SOUTH-WEST NIGERIA

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## ABSTRACT

*Students are able to exhibit numerous learning skills in the course of schooling, especially on e- resources usage, yet fail to judiciously access and utilize the resources for their fullest academic advantage because of their lack of necessary learning skills, strategies, and tactics to locate needed information, as well as the skills to verify the authenticity of the accessed information. These, therefore, call for the need to assess the influence of undergraduates' learning skills on electronic resources usage in private universities in South-west Nigeria. Descriptive survey design was adopted for the study with population of 4684 undergraduates across faculties of Social Sciences/Management and Sciences in fifteen (15) private universities in South-west Nigeria. Multi-stage sampling procedure was adopted for this study with the use of purposive sampling to select common faculties in all the universities at the first stage. The second stage was to purposively select three (3) from the common departments in the selected faculties with the highest population of students. The total number of undergraduates in the selected departments from 200-400 levels is 1,899. Due to the large number of undergraduates in the selected departments, a sampling fraction of 70% was drawn using proportionate to size at the third stage. This gave a sample size of 1,327. Adapted questionnaire with three sub-scales was employed to gather data on the learning skills and purpose(s) of e-resources use by the respondents. Data collection was carried out between April and October, 2020. Frequency counts, percentages, mean, standard deviation and the Pearson Product Moment Correlation were the methods used to analyze the study's data. The findings revealed that the undergraduates made use of e-resources for facilitating class and home assignments, gathering materials for formulating term papers, building up projects' reports, knowledge update and personal self-development of the respondents. The findings further indicated that a significant relationship exists have between learning skills and e-resources usage by the undergraduates. Thus, learning skills have influence on electronic resources use by undergraduates in private universities in South-west Nigeria. Therefore, the managements of the universities are implored to provide and coordinate the critical, creative, communicating and collaborative skills needed by the undergraduates, and endeavour to subscribe to relevant and current e-databases in order to meet the varying information needs of the students as means of addressing the learning skills on e-resources of the undergraduates.*

**Keywords**: Learning skills, E-resources, Undergraduates, Critical thinking, E-information

## INTRODUCTION

The term 'learning styles' and 'learning skills' have been used interchangeably in literature to explain the differences in individual learning approaches. For instance, Vaverde-Berrocoso, Garrido-Arroyo, Burgos-Videla and Morales-Cevallos (2020) defined learning styles as cognitive, affective, and psychological behaviours that indicate the manner to which learners interact with, perceive, process, store, recall and respond to the learning environment. It is the ability to collect and/or retrieve information, organise and manage information, assess the quality, importance, and usefulness of information. It is concerned with means of generating accurate information through the use of existing resources (Vaverde-Berrocoso, et al, 2020). The study noted that learning skills involve a careful attention and critical examination of mind in order to acquire knowledge through reading, listening, remembering and using of time.

More often than not, learning skills of undergraduates are expected to enhance their ability to find, organize and assess electronic information resources in terms of quality and importance for better academic performance. Learning skills could also include inventive thinking and effective communication for improved productivity. Overtime, various stakeholders have developed a framework for effective learning in the 21st century. The elements of learning standards recommended for every student include; content knowledge of 21st century themes, innovation skills, information media and technology skills, as well as life and career skills. The skills needed by undergraduates also include critical thinking, creative thinking, communicating and collaborating skills. These skills could assist the learners in analyzing, listening carefully, reading, speaking, writing, resolving conflicts and facilitating team building.

Electronic resource is seen as information materials accessed via computer or any electronic device that delivers a collection of data, such as full text bases, electronic journals, image collections, other multimedia products and numerical, graphical or time based, as a commercially available title that has been published with the aim of being marketed. Similarly, Konappa (2014) in Ridwan, Felix, and Mohammed (2019) described e-resources as those information resources accessed by users via a computing network from inside the library or remote to the library, and include all the electronic materials accessible via mainframe/handheld mobile device and personal computer (Dongardive, 2015). Examples of e-resources include the full text databases, numerical, electronic journals, image collections, multimedia products, graphical or time-based delivered as CD-ROM, tape, and the Interne. The resources are important due to their enormous advantages to students and other scholars. It affords the undergraduates with opportunity of accessing relevant and current information from different subject areas.

However, it has been observed that undergraduates/learners are capable of demonstrating different learning skills, but are not necessarily using it efficiently to access e-resources for academic purposes. According to Ramraj and Marimuthu (2021), undergraduate learners can search on electronic databases, yet they fall short of the necessary learning skills, strategies and tactics to locate the information needed effectively. They also lack the needed skills to verify the authenticity of information accessed. As a result, there are concerns about how undergraduates use their skills in accessing electronic-based information resources, and their ability to analyse, listen carefully, read, speak, write, resolve conflicts and facilitate team building. These call for

the need to assess different learning skills and e-resources usage among undergraduates in private universities in South-west Nigeria.

## OBJECTIVES OF THE STUDY

Specifically, the study sought to:

i. Ascertain the learning skills of undergraduates in private universities in South-west Nigeria;
ii. Find out the purposes of e-resources usage by undergraduates in private universities in South-west Nigeria; and
iii. Establish the relationship between learning skills and e-resources usage by undergraduates in private universities in South-west Nigeria.

## REVIEW OF RELATED LITERATURE

Learning is a skill which entails commitment, self-discipline, as well as conscious practice. Learning skills involve critical thinking, problem solving and information literacy. The types of learning style include the visual (supported by images, pictures, and spatial organization of elements), auditory (aided by music, sound, rhyme, rhythm, speaking or listening), reading/writing (by reading or writing the material you want to learn) and the kinesthetic (aided by movement from one location to another). This concept can also be explained and understood by considering the key role played by cognitive strengths and weaknesses. Strong learning skills are required for success in every aspect of school (Stamm, Francetic, Reilly, Tharp and Thompson, 2021). They are indicators of how undergraduates learn rather than what is learnt.

A number of studies have been conducted on learning skills and e-resources usage among undergraduates. For instance, Adeniran (2013) employed survey method to investigate the use of electronic resources by undergraduates at the Redeemer's University Library, Mowe, Nigeria. The study reported that quite a number of undergraduates were aware of the different types of e-resources available in the university library; and that they made use of these resources mostly for research, assignments, current awareness, information acquisition, e-mail and news acquisition. Factors such as large mass of irrelevant information, the need to filter the results from search, download delay, failure to find information, inadequate or lack of search skills, high cost of access, inaccessibility of some e-resources, difficulties in navigating through e-resources were reported to be hindrances to effective utilization of these resources by the undergraduates.

Omeluzor, Akibu and Akinwoye (2016) investigated perception, use and challenges of e-information resources among students of Federal University of Petroleum Resources, Effurun, Nigeria. Census of 249 undergraduates in College of Technology was taken. The result of the descriptive statistics indicated that respondents used e-journals, e-databases, web, OPAC and repositories that the resources used in the library were influenced by users' perception. Inadequate training, unreliable Internet connectivity, insufficient e-resources in various study areas, unavailability of e-resources and difficulty in identifying relevant information to meet users' needs were some of the identified challenges. Owolabi, Idowu, Okocha and Ogundare (2016) in Liasu and Bakrin (2022) evaluated usage of e-information resources by undergraduates in the Faculties of Education and the Social Sciences in University of Ibadan. Their findings showed that internet services, e-mail services, online databases and e-databases were the

available e-information resources often used by the respondents. They however, reported erratic power supply, poor network/Internet connectivity and limited access to computer terminals as limitations to the e-resources usage among these users.

In a study of e-resources usage and learners' skills, Ilogho and Nkiko (2014) examined students' ability to distinguish diverse information sources as well as assess the effectiveness of information literacy programs of private universities. Sample size of 359 respondents was drawn proportionately from a population of 400 from the selected universities. The study employed descriptive survey data through the Monash University Library Questionnaire on Information Literacy in their study. The results showed that a significant level of the respondents have low knowledge of information literacy skills, high deficiency in identifying diverse information sources and the various information literacy programmes. The study concluded that sound information literacy skills is a desideratum in knowledge acquisition and recommended, among others, that information literacy skills be integrated into secondary and tertiary schools' curricula.

Tekkol and Demirel (2018) examined the influence of self-directed learning skills based on university type, gender, field and year of study, academic success, university entrance score, income level, and the desire to pursue a graduate degree in Kastamonu University, Kastamonu, Turkey. Directed Learning Skills Scale developed by Askin was used to gather data for the study. Self-directed learning skills were found not to vary based on university, year of study, income level. The results further indicated a moderate positive relationship between self-directed learning skills and lifelong learning tendencies. Coşkun (2018) examined students' metacognition thinking skills based on screening model. The study was carried out among 407 students of faculties of physical education and sports, education science and letters, business administration, theology, engineering, forestry and agriculture at Kahramanmaras Sutcu Imam University, Turkey. The result of correlation analysis conducted indicated that the university students have higher levels of metacognitive thinking ability with their thinking skills, reflective thinking skills, decision making skills and alternative evaluation sub-dimensions. The author submitted that students' level of metacognitive thinking skill and class level have been on the increase with Faculty of Theology students' possessing highest level of metacognitive thinking skills.

Alkathiri, et al (2018) systematically reviewed the relationship between learning styles and creative thinking skills of undergraduates in King Saud University, Riyadh, Saudi Arabia. Five e-databases were applied with a focus on the relationship between learning styles and creative thinking skills. Four key themes such as evolution of creative thinking in academic progress, main learning styles, learning styles and student achievement, and learning styles and creative thinking skills correlation were used to explain the concepts. The article concluded that creative thinking skills are the desirable competency for any professional.

## METHODOLOGY

Descriptive survey design was adopted for this study. The population comprised 4684 undergraduates across faculties of Social Sciences/Management and Sciences in fifteen (15) private universities in South-west Nigeria. The universities were selected based on years of

existence. Multi-stage sampling procedure was adopted with the use of purposive sampling technique to select faculties that are common in all the universities at the first stage. The common faculties in these universities are Science and Social Science/Management. The second stage involved purposive selection of three (3) departments with the highest population of students out of the commonly available departments in the selected faculties. Therefore, Departments of Economics, Sociology and Psychology were selected from the Faculty of Social Science while Department of Chemistry, Physics and Bio-Chemistry were selected from the Faculty of Sciences. The total number of undergraduates in the selected departments from 200 - 400 levels is 1899. Due to the large number of undergraduates in the selected departments, a sampling fraction of 70% was drawn using proportional to size at the third stage. This is to ensure a representative sample reflecting the selected departments and faculties. This gave a sample size of one 1327 respondents.

Adapted questionnaire with three sub-scales was employed to gather data on the learning skills and purpose(s) of e-resources usage by the respondents. Administration of instrument and data collection was carried out between April, 2020 and October, 2020. Frequency counts, percentages, mean, standard deviation and correlation (Pearson Product Moment Correlation) were the methods used to analyze the data collected for the study. The results are as presented in Tables 1- 4

**Table 1: Respondents' Socio-demographic characteristics**

| Social-Demographic Characteristics | Categories | Frequencies | Percentages |
|---|---|---|---|
| **Faculty** | Social/Management Science<br>Science | 621<br>498 | 55.5<br>44.5 |
| **Department** | Economics<br>Sociology/Acct<br>Psychology/Bus. Admin<br>Chemistry<br>Physics<br>Biochemistry | 211<br>171<br>239<br>251<br>109<br>138 | 18.9<br>15.3<br>21.4<br>22.4<br>9.7<br>12.3 |
| **Gender** | Male<br>Female | 645<br>474 | 57.6<br>42.4 |
| **Age range (in years)** | 16 – 20<br>21 – 25<br>26 – 30<br>Others | 743<br>324<br>35<br>17 | 66.4<br>29.0<br>3.1<br>1.5 |
| **Level** | 100<br>200<br>300<br>400 | 99<br>391<br>365<br>264 | 8.8<br>34.9<br>32.6<br>23.6 |

**n = 1,119**

The distribution of respondents by faculty indicated that there were more respondents in the Faculty of Social/ Management Science (55.5%) than those in the Faculty of Science. In terms of distribution by department, undergraduates in Physics Department were least in number, while those in Chemistry Department recorded the highest number of respondents. Also, in terms of gender, male undergraduates, 645(57.6%) were more in number than their female counterparts, 474 (42.4%). The distribution of respondents by age revealed that 743(66.4%) of the respondents were aged between 16 – 20 years, while only 17(1.5%) of the respondents claimed they were above 30 years which was classified as "Others". The analysis of demographic profiles of respondents implies that the undergraduates in these universities are homogeneous.

**Table 2: Learning skills of the respondents**

| S/N | Items | SA N % | A N % | D N % | SD N % | $\bar{x}$ | SD |
|---|---|---|---|---|---|---|---|
| **Critical thinking (Mean = 13.76, SD = 3.092)** | | | | | | | |
| 1. | Electronic resources use enables me to analyse and evaluate alternative point of view | 381, 34.0 | 692, 61.8 | 18, 1.6 | 28, 2.5 | 3.55 | 0.656 |
| 2. | I make use of e-resources to tackle pointed questions and solve problems relating to my studies | 446, 39.9 | 561, 50.1 | 86, 7.7 | 26, 2.3 | 3.58 | 0.727 |
| 3. | The information obtained through electronic information resources reflect on critical decisions and processes taken in my course of study | 354, 31.6 | 680, 60.8 | 58, 5.2 | 27, 2.4 | 3.51 | 0.706 |
| 4. | I find electronic resources use less cumbersome and helpful in taking decision on my project materials | 353, 31.5 | 511, 45.7 | 130, 11.6 | 125, 11.2 | 3.12 | 1.003 |
| **Creative thinking skills (Weighted Mean = 13.76, SD = 2.672)** | | | | | | | |
| 5. | Use of electronic resources enables me | 431, 38.5 | 439, 39.2 | 216, 19.3 | 33, 2.9 | 3.13 | 0.824 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | to design a new learning environment for myself | | | | | | |
| 6. | I can improvise with the use of e-resources | 219, 19.6 | 351, 31.4 | 319, 28.5 | 230, 20.5 | 3.43 | 0.633 |
| 7. | I can make overturn and questions with the use of e-resources | 368, 32.9 | 707, 63.2 | 18, 1.6 | 26, 2.3 | 3.27 | 0.606 |
| 8. | I can entertain with the use of e-resources | 520, 46.5 | 501, 44.8 | 24, 2.1 | 74, 6.6 | 3.31 | 0.809 |
| **Communication Skills (Mean = 13.77, SD = 3.102)** | | | | | | | |
| 9. | I use e-resources for variety of communication such as to inform, instruct, motivate and persuade my colleagues to do well in their study | 636, 56.8 | 363, 32.4 | 94, 8.4 | 26, 2.3 | 3.64 | 0.744 |
| 10. | e-resources utilisation enables me to have a priori knowledge of innovation in the field of study as well as to assess their impact on my study | 587, 52.5 | 380, 34.0 | 123, 11.0 | 29, 2.6 | 3.46 | 0.779 |
| 11. | Electronic resources use has contributed positively to my listening reading, speaking and turn taking skills | 421, 37.6 | 557, 49.8 | 55, 4.9 | 86, 7.7 | 3.37 | 0.839 |
| 12. | Electronic resources use has contributed positively to my listening reading, speaking and turn taking skills | 491, 43.9 | 499, 44.6 | 99, 8.8 | 30, 2.7 | 3.30 | 0.740 |
| **Collaborating Skills (Mean = 13.06, SD = 2.940)** | | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 13. | Electronic resources expose me to research done in other climes | 483, 43.2 | 593, 53.0 | 18, 1.6 | 25, 2.2 | 3.37 | 0.632 |
| 14. | The information obtained through the use of e-resources enhances my goal setting | 314, 28.1 | 453, 40.5 | 173, 15.5 | 179, 15.9 | 3.07 | 0.789 |
| 15. | I have the required skills needed to build a team in resolving conflicts | 254, 22.7 | 433, 8.7 | 312, 27.9 | 120, 10.7 | 3.12 | 0.819 |
| 16. | I enjoy working in a group where I am comfortable | 663, 59.2 | 380, 34.0 | 47, 4.2 | 29, 2.6 | 3.50 | 0,700 |
| **Overall 53.73 12.006** | | | | | | | |

The result presented in Table 2 revealed that among the learning skills possessed by the respondents were communicating skills ($\bar{x}$= 13.77, SD = 3.102), critical thinking skills ($\bar{x}$ = 13.76, SD = 3.092), creative thinking skills ($\bar{x}$ = 13.14, SD = 2.872) and collaborative skills (mean = 3.06, SD = 2.940). Specifically, under critical skill, 446 (39.9%) of the respondents opined that they make use of e-resources to tackle pointed questions and solve problems relating to their studies. Also, it was the respondents' consensus opinions that e-resources use enables them to analyze and evaluate alternative point of view. This was evident in the responses recorded where 381(34.0%) strongly agreed, 692(61.8%) agreed and less than 5% of the respondents recorded their disagreements (18, 1.6% D and 28, 2.5% SD).

In addition, the level of creative skills possessed by the respondents was relatively significant as shown in number of agreement scores and mean scores recorded (Table 2). For instance, 91.3% of the respondents claimed that they could entertain with the use of e-resources while only 8.7% disagreed with this fact. In the same vein, 431(38.5%) of the respondents opined that e-resources use enables them to design a new learning environment for themselves, while 688 constituting 61.4% claimed that they made use of electronic resources for other purposes other than designing of new learning environment.

Another skill the respondents had is communicating skills. This is evident in the responses recorded, where 999 (89.0 %) of the respondents indicated that they made use of e-resources for various communication such as to inform, instruct, motivate and persuade their colleagues to do well in their study. In terms of innovation, 967 (86.5%) respondents submitted that electronic resources usage enables them to have a prior knowledge of innovation in the field of study as well as to assess their impact on their study. The table further revealed that under collaborating skills, 663(59.2%) of the respondents claimed that they enjoy working in a group

where they are comfortable. This response recorded a mean score of 3.50. This has shown that although, undergraduates in the private universities in South-west Nigeria had other learning skills, communicating skills and critical thinking skills were most dominant of all the learning skills by the respondents.

**Table 3: Purposes of e-resources use by the respondents**

| S/N | Items | SA N % | A N % | D N % | SD N % | $\bar{x}$ | SD |
|---|---|---|---|---|---|---|---|
| 1. | I use e-resources for collation of materials for my projects report | 702, 62.7 | 253, 22.6 | 101, 9.0 | 63, 5.6 | 3.42 | 0.874 |
| 2. | Electronic resources use enables me to gather materials needed in preparation for examinations | 668, 59.7 | 300, 26.8 | 87, 7.8 | 64, 5.7 | 3.40 | 0.860 |
| 3. | I use e-resources for class and home assignments | 658, 58.8 | 291, 26.0 | 103, 9.2 | 67, 6.0 | 3.38 | 0.883 |
| 4. | Overall, electronic resources are very much relevant to my studies | 491, 43.9 | 90, 43.8 | 76, 6.8 | 62, 5.4 | 3.27 | 0.808 |
| 5. | I use e-resources for gathering materials for term papers | 58, 45.4 | 296, 26.5 | 257,23.0 | 58, 5.2 | 3.12 | 0.937 |

Result presented in Table 3 showed that 702 constituting 62.7% of the respondents claimed that they use e-resources for materials collation in favour of their final year projects report. Similarly, 668(59.7%) of the respondents opined that e-resources use enables them to gather materials needed in preparation for examinations. Another purpose for which respondents claimed they used e-resources was for class and home assignment ($\bar{x}$=3.38, 84.8%). Large number of the respondents stated that e-resources are very much relevant to their studies. It could, therefore, be deduced from this result that the purposes for which undergraduates made use of e-resources were to gather materials for project ($\bar{x}$=3.42), to gather materials for examination ($\bar{x}$=3.40) and for class and home assignments ($\bar{x}$=3.38) in that order. It could be noted from the results shown in Table 3 that most of the respondents indicated that the most prominent purpose of using e-resources was for project report writing, class and home assignments.

However, there is no significant relationship between learning skills and e-resources usage by undergraduates in private universities in South-west Nigeria.

The hypothesis was tested using Pearson Product Moment Correlation and the summary of the result is presented in Table 4.

**Table 4: Summary of correlation results showing relationship between learning skills and e-resources usage by undergraduates in private universities**

| Variables | Mean | St. dev. | N | Df | R | Sig. p. | Remark |
|---|---|---|---|---|---|---|---|
| Learning skills | 53.73 | 12.006 | 1119 | 3 | 0.360 | 0.000 | Sig. |
| Use of e-resources | 21.86 | 7.142 | | | | | |

The result of the hypothesis as shown in Table 4 revealed that positive linear relationship exists between learning skills and use of e-resources by the respondents in South-west Nigeria ($r = 0.360$; $P < 0.05$). The significant p-value is 0.000 which is less than 0.05 level of significance; therefore, the null hypothesis is hereby rejected. This means that there is a significant relationship between learning skills and e-resources use by undergraduates in private universities in South-west Nigeria. In other words, as learning skills of undergraduates improves, there is propensity that e-resources usage by the undergraduates will improve correspondingly.

## DISCUSSION OF THE FINDINGS

The result of the research shows that learning, communication, and critical thinking skills were the dominant skills acquired by the undergraduates in private universities in south-west Nigeria. It is evident from the result that the respondents use e-resources for varied communication skills such as to inform, motivate, instruct, and to persuade their colleagues to excel in their studies. The study also reveals the prominent purposes of using e-resources by the students to include project report writing, class and home assignments, as well as to prepare for examinations. The hypothesis indicates that there is a positive linear relationship between learning skills and the use of e-resources by the undergraduates of private universities in south-west Nigeria. It can, therefore, be deduced that as learning skills of the undergraduates improve, so their e-resources usage improves.

## CONCLUSION

The study established that learning skills have influence on e-resources use by undergraduates in private universities in South-west Nigeria. The quality of e-resources contents in terms of richness, adequacy, completeness, clarity, relevance and usefulness are found to be of importance. From the present study, it was found that e-resources contents and characteristics have influenced the learning skills and e-resources usage.

## RECOMMENDATIONS

Arising from the findings of the study, the following recommendations are made:

1. To sustain high level of electronic resources use by undergraduates in the private universities in South-west Nigeria, the university management should provide means of coordinating the critical, creative, communicating and collaborative skills of

undergraduates as a way of addressing their learning skills towards this information source.

2. Since the results showed that e-resources are being used to facilitate class and home assignments, gathering materials for formulating term papers, building up projects reports, knowledge update and personal self-development of the respondents, the need for subscription to relevant and current e-databases was suggested to meet the varying information needs of the undergraduate students.

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