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Primary Education Undergraduates' Awareness and Perception on The Utilization of Open Educational Resources for Learning in University of Ilorin

*Rachael Ojima Agarry[1, *], Eyiyemi Veronica Omolafe[1], Ebenezer Omolafe Babalola[2], Gboyega Ayodeji Aladesusi[2]*

[1] Department of Adult and Primary Education, University of Ilorin, Nigeria
[2] Department of Educational Technology, University of Ilorin, Nigeria
*Correspondence: E-mail: rachealojima@yahoo.com

ABSTRACTS

This study investigated the awareness and perception of the utilization of Open Educational Resources (OER) for learning among primary education undergraduates at the University of Ilorin. The study adopted the descriptive research of survey type. This study was limited to the primary education undergraduate students in the Adult and Primary Education Department, University of Ilorin. 150 undergraduates were randomly selected from the department. Structured questionnaires were used to elicit a response from the respondents. The finding of this study shows that undergraduate students are aware of OER's learning tools. Primary education undergraduate students' perception towards OERs tool for learning is positive, there are factors inhibiting effective use of OER for learning among students, undergraduate students used OERs site for learning, and there was no significant difference between male and female undergraduates' perception of OER tools for learning. Based on the findings of this research, the following recommendation was made. Lecturers should endeavor to put their scholastic publications in the public domain of their institutions, as this will help the student to lay hands on more quality materials and the government should provide funds to ensure the stability of the OER movement.

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1. INTRODUCTION

Primary education is universally accepted as the foundation laying level of education in all nations of the world. It provides the mini-structural framework on which the quality of other levels of education is anchored. Primary education is the education given to children aged 6 to 12 years. This level of education is the foundation of all other forms of higher education and it is a deliberate and structured level of education for children to acquire certain skills to help them become useful members of society.

Primary education is universally accepted as the foundation laying level of education in all nations of the world. It provides the mini-structural framework on which the quality of other levels of education is anchored (Etor *et al.*, 2013; Edwin-Ezoka *et al*., 2020). Hence undergraduate students in the primary education department need to make use of resources that will enhance their performances in other to become good educators, Open Educational Resources (OER) is one of the mediums to explore in other to bring this to reality.

Learning may take place through different platforms of social media, internet-based tools, and services that enable learners to collaborate, with one another, generate content, gather and disseminate information online. The changes and service brought about by Information Communication Technology (ICT) have been quite transformative to the extent that even the socialization of the human species could be incomplete without being equipped with the necessary skills, knowledge, and motivation required to understand, cope with and benefit from the impact of ICT on all aspects of life (Babagana *et al.*, 2016; Upadhyay & Bijalwan, 2015; Krubu and Osawaru, 2011). ICT stimulates governments all over the world to delve into the great potentials of ICT and use it as a vehicle for wealth creation, economic recovery, and educational development. ICT is a good medium for the student to achieve their academic achievement; OER is one of the ICT mediums needed.

Many institutions have become open by developing programs of open sharing of educational materials and ideas. The ocean of information on the internet is in a variety of formats with relative ease of access is among the reasons that brought the technology academic patronage, especially on OER sites (Issa *et al.*, 2020).

Technology has transformed learning in students; especially for those with little funds who were not able to buy textbooks, let alone attend prestigious learning institutions in the world, but due to advances in technology via the internet, access to OER has been achieved (Njeze, 2020; Butzin, 2001). Some researchers found that students were able to locate OERs easily and likewise, they found them to be better than traditional textbooks. This implies that students have a positive perception towards OER for learning. OER are those resources that attract no fees, subscriptions, tuitions, registrations, obligations, and so on, to the consumer or user of the said resources.

OER are teaching and learning resources such as textbooks, multimedia, tests, software, and assessments that reside in the public domain or have been released under an intellectual property license, such as a Creative Commons license that permit the free use and repurposing of the resources by others (Hilton, 2016). Educators create OER intending to allow all teachers and instructors to edit, combine resources, and create new content free of any copyright violations (Abramovicha & McBrideb, 2018).

OER are teaching, learning and research materials in any medium digital or otherwise that reside in the public domain or have been released under an open license that permits no-cost access, use, adaptation, and redistribution by others with no or limited restrictions. Open textbooks are openly licensed textbooks and are the type of OER most often used by faculty who adopt and implement OER as part of their course materials. Recent studies suggest OER,

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which does not only save students money but also improves grades and decreases the rates of students receiving D, E, and F (Colvard *et al.*, 2018).

OERs can be divided in many ways. Open courseware (OCW), open textbooks, and Massive Online Open Courses (MOOCs) can all be. OERs include complete courses, individual course units or modules, textbooks, lesson plans, syllabi, lectures, assignments, game-based learning programs, quizzes, podcasts videos, audios, interactive simulations, and interactive multimedia (Georgiadou & Kolaxizis, 2019). OERs can also be divided up by their content format, though most OERs will be composed of a variety of media: Text-led, video-led, animation-led, and multiple media. OERs are beneficial to students as several studies suggested. Qualitative and quantitative data published that examine students' awareness of OERs in place of standard resources show that OERs are improving students' attitudes and behaviors toward learning (Fischer *et al.*, 2015).

However, an important problem in the proliferation of OERs in education is awareness. Survey results from over 3000 higher education faculty in the US show that most faculty remain unaware of OERs, and it is not a driving force in educational material adoption decisions. Important barriers are the effort required to find and evaluate the educational materials. Further, students are not aware of OERs as studies suggest. Some researchers exploring students' perceptions of OERs in a life science faculty at the De Monforte University, UK, found that most of the students had not heard the term OER.

In related studies, Olufunke and Adegun (2014) studied the utilization of OERs among undergraduates in Universities in Nigeria. We used a descriptive research design. The finding of the study shows that the undergraduates were moderately aware of the existence of OERs. We used qualitative analysis and a scale that ranged from zero to three. This study used Multi-stage and simple random sampling and the sample size was from all the faculties in the universities sampled. This study could have yielded different findings. We used undergraduate students from the same faculties and the same cohorts. Some researchers investigated students' awareness and attitudes toward OERs at the University of Lagos in Nigeria.

The study concluded that participants were limited in their understanding of the concept of OERs as well as in their awareness of OER repositories. Technology has transformed learning in students; especially for those with little funds who were not able to buy textbooks, let alone attend prestigious learning institutions in the world, but due to advances in technology via the internet, access to OER has been achieved (Njeze, 2020). In a study by Fischer *et al.* (2016), it was established that the OERs provided satisfaction to the students, costs that were lower and educational outcomes that were the same or even better than traditional textbooks. Some researchers found that students were able to locate OERs easily and likewise, they found them to be better than traditional textbooks. This implies that students have a positive perception towards OER for learning.

Lin (2019) carried out a study Teaching and Learning without a Textbook: Undergraduate Student Perceptions of OER. The Study investigated 46 undergraduate students' perceptions of using only OER in an introductory course in a large American public university. The result indicated that students perceived that there are advantages of using OER including textbook cost savings, access to dynamic and plentiful OER materials, that OER enables mobile learning, and that OER fosters the development of self-directed skills and copyright guidelines. Afolabi (2017) investigated the first-year University undergraduates' experiences in the use of OER in online learning and their in-course achievement.

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The design selected for the study was survey and quasi-experimental. A total number of 106 University undergraduates participated in the study after a preliminary study was conducted to ascertain undergraduates' perception and acceptability of OER. The study noted that students have a positive perception of OER. The author explained that OER can successfully improve learners' understanding of difficult concepts in Physics. Kurelovic (2016) noted that implementation of OER has certain limitations, in particular for small countries which use a non-English language, have limited resources and support to customize and create OER, their educational practice is founded on traditional teaching methods with occasional use of digital contents and ICT.

There are specific challenges associated with OERs besides language, which is a key issue. However, some researchers summarize the following as issues in OER:

(i) License issue. Understanding of licensing terms is required, which may stand in the way of particular types of reuses, such as newspaper articles or pictures.
(ii) Legal issues for platforms hosting OER. In some circumstances, they may be made liable for the actions of uploaders.
(iii) Privacy issues. Users may need to be aware that the use of some OER may involve data collection.
(iv) Level of legal and copyright literacy of developers, librarians, and others. Where this is not clear, there may be mistakes or confusion as to what is possible.
(v) A need to combat the assumption that an OER is of a lower quality than conventional materials and sources, given that it does not always follow a traditional editorial process. OERs can be peer-reviewed through open methods and there is a lot of high-quality material available.
(vi) Teachers and other educators creating OERs do not receive credit for the time invested, in contrast with traditional educational sources, such as textbooks.
(vii) Discoverability. While a lot of OERs exist, they may not easily be found by teachers or learners.
(viii) Technological barriers. ICTs are not accessible to everyone, and many lack the skills or confidence to use them. With a large amount of OER material made available online, efforts need to be made both in digital literacy and access to digital technologies.
(ix) Accessibility issues. Not adapting materials to the needs of users with disabilities can stand in the way of access to knowledge.

The use of OER is not confined to eLearning contexts or distance education alone. OER can be used online or in traditional classrooms. There is no single paradigm associated with OER, nor are there any preconceived approaches to learning that limit the generalizability of OER. On the other hand, individual OER can be specifically designed to support a focused learning theory. In addition, OER is important learning material with the potential to facilitate the expansion of learning worldwide (Issa *et al.*, 2020).

Some researchers revealed that there is no significant difference between males and females based on their utilization of electronic information resources for learning. It was revealed in the study that male and female users have a 50/50 percentage of use of e-resources. As gender may or may not play a role in the adoption of OER for learning. Issa *et al.* (2020) investigated Undergraduates' attitudes towards the utilization of OER for learning, the differences between male and female undergraduates on their attitude towards the utilization of OER for learning were determined. From the result, it was revealed that there was a difference in gender of undergraduates in respect to their attitude towards utilization of OER for learning.

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Educational resources are considered as essential intellectual property in a competitive higher education domain, more and more institutions and researchers are sharing their digital learning resources over the internet openly and for free, as OER. The overview of the current state of OER showed that a growing number of digital resources are available online to be deployed by the students. The use of OER in this present dispensation is considered to be very essential. It is indicated that students use a limited range of technologies for learning, with established technologies such as VLEs, Google, and Wikipedia is the most frequently used, based on the previous findings it is observed that utilization of OER is not common among primary education undergraduates. Therefore, to make the best use of OER in Nigeria, awareness, perception, and use of OER for learning among primary education undergraduates should be looked into. Hence, this study investigated the awareness and perception of the utilization of OER for learning among primary education undergraduates in the University of Ilorin.

The following Research Questions was answered in this study:

(i) Are primary education undergraduate students' aware of OERs for learning?
(ii) What is primary education undergraduate students' perception of the use of OERs tools for learning?
(iii) What are the factors militating against the effective use of OER for learning among students?

The following hypothesis was tested at a 0.05 level of significance in this study using H_{O1} **(there** is no significant difference between male and female student undergraduates' perception of OER tools for learning).

2. METHOD

This research examined the perception and utilization of OER for learning among primary education undergraduates at the University of Ilorin. This study is a descriptive research of the survey type. The population for this study was undergraduates of the University of Ilorin. The target population was undergraduates in the department of adult and primary education, simple random sampling technique was used to select one hundred and fifty (150) students from the department of primary education, university of Ilorin who participated in this study. A questionnaire was used to gather necessary information from the respondents. The questionnaire used for this study consists of two sections. Section A and B, Section A contained the demographic information of the respondents, Section B contained items to investigate the perception and utilization of OER for learning. The items on section B were rated on a response mode of Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD).

3. RESULTS AND DISCUSSION

3.1. Research Question One: Are Primary Education Undergraduates Aware of OERs for Learning?

To investigate primary education undergraduate students' awareness of OERs tool for learning as stated in research question 1, and as shown in **Table 1**. The mean score for each of the question items are listed in the last column in **Table 1**. The average mean score for each of the items is 2.5 The average mean score of 2.5 was calculated by adding up each value of the 4-point Likert scale and divided by 4 (Strongly Agree= 4, Agree = 3, Disagree = 2, and Strongly Disagree = 1). Item 9 and 10 had the highest mean score of 3.0, which is greater than

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the average mean score (2.5). Item 1 and 2 had the lowest mean score of 2.8, which is also greater than the average mean score (2.5). The mean of the entire item is 2.9, which is greater than 2.5 of the average mean score. This implies that primary education undergraduates are aware OERs learning tools.

Table 1. Undergraduate Students' Awareness of OERs Tool for Learning.

S/N	Item	SA	A	D	SD	Mean
1	I have never heard of the OERs in my academic life	40	58	32	20	2.8
2	I have only heard of e-resources in my academic life and not OERs.	30	65	47	8	2.8
3	I have seen OER before this time	28	81	34	7	2.9
4	I am familiar with concept of OER	30	84	25	11	2.9
5	I am just hearing of the concept of OER for the first time	39	69	27	15	2.9
6	I have come across online learning that is offered to be re-used and modified by the users	32	86	19	13	2.9
7	I am aware of the creative commons license and resources licensed under OER	33	80	24	13	2.9
8	I have no idea of creative common license	40	68	36	6	2.9
9	I am familiar with Wikipedia as an OER material resource free	38	83	25	4	3.0
10	I am familiar with MOOC as an OER material resource free to use	46	66	24	14	3.0
	Grand Mean					**2.9**

3.2. Research Question Two: What Is Primary Education Undergraduates' Perception of The Use of OERs Tools for Learning?

To investigate undergraduate students' perception of the use of OERs tools for learning as stated in research question 2, and as shown in **Table 2**. The mean score for each of the question items is listed in the last column of **Table 2**. The average mean score for each of the items is 2.5 The average mean score of 2.5 was calculated by adding up each value of the 4-point Likert scale and divided by 4 (Strongly Agree= 4, Agree = 3, Disagree = 2, and Strongly Disagree = 1).

Table 2. Primary Education Undergraduates' Perception on The Use of OERs Tools for Learning.

S/N	Item	SA	A	D	SD	Mean
1	It is very difficult to find OERs in a Specific course	43	77	25	5	3.1
2	OERs do not assist me in doing my assignment	34	67	32	17	2.8
3	OERs are very difficult to access	40	59	43	8	2.9
4	OERs are very easy to access	41	79	23	7	3.0
5	OER too hard to edit or modify	41	68	31	10	2.9
6	OER not relevant to my local context	29	64	42	15	2.7
7	OER takes too much time to search, select, edit, and apply	46	56	31	17	2.8
8	OER improve my performance	45	81	15	9	3.1
9	I enjoy learning in an environment that incorporates OER	47	68	27	8	3.0
10	I would describe using OER as interesting	34	84	20	12	2.9
	Grand Mean					**2.92**

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Table 2 shows the item 1 and 8 had the highest mean score of 3.1 which is greater than the average mean score (2.5) and item 2, has the lowest mean score of 2.7 which is also greater than the average mean score (2.5). The grand mean of the entire item is 2.92 which is greater than the 2.5 average mean scores. This implies that primary education undergraduates have a positive perception of OER's tool for learning.

3.3. Research Questions Three: What Are the Factors Militating Against Effective Use of OER for Learning Among Undergraduates?

To investigate factors militating against effective use of OER for learning among students stated in research question 3, and as shown in **Table 3**. The mean score for each of the question items is listed in the last column of **Table 3**. The average mean score for each of the items is 2.5. The average mean score of 2.5 was calculated by adding up each value of the 4-point Likert scale and divided by 4 (Strongly Agree= 4, Agree = 3, Disagree = 2, and Strongly Disagree = 1). Item 3 has the highest mean score of 3.1 while item 2 has the lowest mean score of 2.7 which is greater than the average mean score (2.5). The grand mean of the entire item is 2.91 which is greater than the 2.5 average mean scores. It can be induced that there are factors inhibiting the effective use of OER for learning among students.

Table 3. Factors Militating Against Effective Use of OER for Learning Among Undergraduates.

S/N	Item	SA	A	D	SD	Mean
1	Slow internet connection	45	67	24	14	2.9
2	I do not have the skill to access OER	19	74	43	14	2.9
3	Poor electricity supply hinders me from using OER for learning	39	87	22	2	2.9
4	I do not trust the authenticity of internet-based material like OER	42	65	36	7	2.9
5	The quality of available OER is not up to my needs	31	77	35	7	2.8
6	Unclear Instruction and Guidance	42	62	38	8	3.0
7	The availability of OER is not relevant to my resources	44	54	42	10	3.0
8	OERs are not to be used	30	74	34	12	2.9
9	Lack of support from institution	48	69	25	8	2.9
10	Inadequate resources for my area of specialization	44	66	31	9	2.9
	Grand Mean					**2.91**

4.1.4. Hypothesis One: There Is No Significant Difference Between Male and Female Student Undergraduates' Perception of OER Tools for Learning.

From **Table 4**, it can be deduced that there is no significant difference between male and female student undergraduates' perception of OER tools for learning. This is reflected in the result: t (148) = 0.292, p > 0.005. That is, the result of t-value of 0.292 resulting in 0.19 significance value was greater than 0.05 alpha value. Thus, the null hypothesis is retained. This implies that there was no significant difference between male and female student undergraduates' perceptions of OER tools for learning. The analysis of the results is shown in **Table 4**.

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Table 4. There Is No Significant Difference Between Male and Female Student Undergraduates' Perception of OER Tools for Learning.

Gender of Respondents	N	X	S D	Df	T	Sig.(2-tailed)	Remark
Male	85	27.109	4.304				
				148	0.292	0.19	**Retained**
Female	65	26.21	4.095				

4.2. Discussion

The objectives of this study are to examine primary education undergraduate students' awareness and perception of the use of OER tools for learning, ascertain the factors militating against effective use of OER for learning. The findings show that undergraduate students are aware of OER's learning tools. This result is in line with some researchers who conducted a study in Turkey titled 'Use of open educational resources' and found out that students are aware of OERs for learning. Similarly, Olufunke and Adegun (2014) studied the utilization of OERs among undergraduates in Universities in Nigeria. The findings of the study show that the undergraduates were moderately aware of the existence of OERs.

The findings on perception indicated that primary education undergraduates' perception towards OERs tool for learning is positive, this is in line with Afolabi (2017) which found out that students have positive to OER tools. Furthermore, the result shows that there are factors inhibiting the effective use of OER for learning among students. The findings on the factors agreed with Lin's (2019) study on Teaching and Learning without a Textbook: shows that OER challenges include lacking a tactile sense with OER, slow Internet connections, unclear instruction and guidance, and insufficient self-regulation skills.

The result of the hypothesis shows that there was no significant difference between male and female primary education undergraduates' perception of OER tools for learning. The finding is not in conformity with Issa *et al.* (2020) that investigated the level of utilization of OER for learning among undergraduates and concluded that there was a significant difference based on gender.

5. CONCLUSION

This study concluded that primary education undergraduate students' awareness and perception towards OERs tool for learning is positive, undergraduate students are aware OERs learning tools, there are factors inhibiting effective use of OER for learning among students, undergraduate students used OERs site for learning, and lastly, there was no significant difference between male and female student undergraduates' perception of OER tools for learning. The study, therefore, recommended that University management should make sure OERs tools are available for teaching and learning in schools so that students' academic performances can be improved.

6. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. The authors confirmed that the paper was free of plagiarism.

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