

## Awareness and Use of Open Educational Resources and its Benefits to University Students

Kasumu Rebecca Oluwayimika<sup>ID</sup> and Uduak Idoghoro<sup>ID</sup>

Department of Curriculum Studies/Educational Technology, Faculty of Education,  
University of Port Harcourt, Rivers State, Port Harcourt, Nigeria

### Abstract

The study is descriptive survey research designed to investigate awareness and use of Open Educational Resources (OER) and its benefits to university students. The study area is Ignatius Ajuru University of Education, Port Harcourt, Rivers State, Nigeria. The study population was 424 postgraduate students in the Faculty of Education, Ignatius Ajuru University of Education. A sample of 178 students was involved in the study. A simple random sampling technique was applied in the selection process. The instrument used for the study to collect data from respondents is a structured questionnaire titled awareness and use of open educational resources and its benefits to university students (AUEORBU) with 40-item questions. The designed instrument by the researcher was given to experts in the field of educational technology. The instrument reliability determined by test-re-test was applied and the responses were correlated to obtain the reliability coefficient of .67. mean was the statistical tool used for the study. The study found that students can access open educational resources anywhere in the world, at any time and open educational resources provide an excellent way for alumni to stay connected to the institution and continue with a program of lifelong. Based on the conclusion, the researchers recommended that students and stakeholders participate fully in open educational resources to stay connected to their institutions.

**Keywords:** open resources, educational resources, the impact of OER, type of OER

### Introduction

Open Educational Resources (OER) are text, media, and other digital assets that are freely available, openly licensed, and can be used for research, teaching, learning, and assessment (UNESCO, 2020). OER refers to materials and resources that are freely available for anybody to use, remix, improve, and redistribute under certain licenses (Bell, 2017). These are made to be modified for locally specific situations in order to lower accessibility obstacles by using effective teaching methods. A desire to offer an alternative or improved educational paradigm frequently drives the development and promotion of open educational resources (Sanchez, 2013). Learning, teaching, and research materials in any format or medium that are in the public domain or that are protected by copyright and published under an open license allow free access, re-use, re-purpose, adaption, and redistribution by others are known as open educational resources (UNESCO, 2019). Full courses, course materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials, or procedures used to enable access to information are all considered to be considered "open educational resources" (The William and Flora Hewlett Foundation, 2013).

Open educational resources assist and encourage teachers to adopt, modify, produce, and distribute open educational materials that raise the standard of the educational experience for students, expand access to learning opportunities for everyone, and strengthen instructional strategies. Syllabi, lesson plans, videos, software, exams, teaching methods, group projects, writing exercises, textbooks, learning modules, experiments, simulations, and course designs are just a few examples of the many different

types of open educational resources available. Schools can easily add content that is already openly licensed and available for sharing to their lectures and teaching materials by employing OER. In addition, schools can increase the influence and exposure of their academic work across the global learning community by publishing their work as open educational materials (Green, 2016).

Since OER are educational resources in the public domain or distributed under an open license, they are growing in popularity among those who create online courses. Due to the openness and freedom in using educational resources made possible by the open licensing of materials, the OER movement has enabled educators to become more creative in their instructional methods (Karunanayaka et al., 2016). It has been suggested that using and adapting OER is a cost-effective investment in developing a curriculum and high-quality teaching and learning materials (Dhanarajan & Porter, 2013). The 5Rs idea allows course designers to adapt the course according to the aims and needs. Retain, re-use, revise, remix, and redistribute. The 5Rs of openness is best explained by listing all potential integration strategies for open educational resources (Wiley, 2014).

### Statement of the Problem

Using OER can potentially lower educational financial and geographical obstacles while improving teaching effectiveness and quality. The main obstacles to using our academic rivalry between institutions and instructors are a lack of understanding of open educational materials and copyright laws, a lack of availability, suspicion of their quality, and technological restrictions on sharing and modification.

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Correspondence concerning this article should be addressed to Kasumu, Rebecca Oluwayimika, Department of Curriculum Studies/Educational Technology, Faculty of Education, University of Port Harcourt, Rivers State, Port Harcourt, Nigeria. **Email:** Yinkabecky1@gmail.com

### Objectives

The study's objectives are to investigate the awareness and use of open educational resources and their benefits to university students. Specifically, the study intends to:

1. Examine the benefits of open educational resources to students.
2. Identify the impact of open educational resources on students.
3. Investigate the types of open educational resources used by students.
4. Determine the problems of opening educational resources to students.

### Research Questions

The study's research questions investigate the awareness and use of open educational resources and their benefits to university students. Specifically, the study intends to:

1. What are the benefits of open educational resources?
2. What are the impacts of open educational resources on students?
3. What are the types of open educational resources used by students?
4. What are the problems with opening educational resources to students?

**Table 1**

*Benefits of Open Educational Resources*

Items	M	SD
Students can access open educational resources anywhere in the world, at any time	3.63	.48
Student teachers can use different types of materials, including multimedia to help engage students	3.52	.51
Students can add, remove and edit content to suit their needs	3.51	.50
Student teachers can use a selection of resources to include a wide range of perspectives such as indigenous voices and/or edit resources to ensure language is inclusive and relevant to their students	3.50	.52
Open educational resources can be quickly improved through direct editing or via feedback and any mistakes can be corrected without needing to wait for a new edition or going through a lengthy review process	3.57	.45
Open educational resources can help expand access to learning	3.48	.51
Open educational resources help in enhancement of regular course content	3.34	.50
Open educational resources help in showcasing of innovation and talent	3.60	.49
It is continually improved resources	3.47	.50
Open educational resources provide an excellent way for alumni to stay connected to the institution and continue with a program of lifelong	3.61	.48
Average mean	3.52	.49

Entries in Table 1 revealed that students accepted all the items as the benefits of open educational resources by students. This is because all the item mean was above the criterion mean of 2.50. An overall mean of 3.52 suggests that students can access open educational resources anywhere in the world, at any time and open

The study is descriptive survey research designed to investigate awareness and use of open educational resources and their benefits to university students. The study area is Ignatius Ajuru University of Education, Rivers State. The study population comprises all postgraduate students in the Faculty of Education, Ignatius Ajuru University of Education. A sample of 178 students was involved in the study. A simple random sampling technique was applied in the selection process. The instrument used for the study to collect data from respondents is a structured questionnaire titled awareness and use of open educational resources and its benefits to university students (AUEORBU) with 40-item questions. The researcher's instrument was given to specialists in educational technology to ensure validity. Test-retest was used to assess the instrument's reliability, and the answers were then correlated to produce a reliability coefficient of .67. The statistical methods for the research were mean and standard deviation.

### Results

Research question 1: What are the benefits of open educational resources?

educational resources provide an excellent way for alumni to stay connected to the institution and continue with a program of lifelong.

Research question 2: What are the impacts of open educational resources on students?

**Table 2**

*Impacts of Open Educational Resources*

Items	M	SD
Applying knowledge in a wider context than their course would otherwise allow freedom of access and enhance opportunities for learning	3.72	.45
Support for learner-centered, self-directed and social/informal learning approaches	3.46	.50
The opportunity to test out course materials before enrolling is also an impact of open educational resources	3.62	.48
Educators can benefit from students/user feedback and open peer reviews	3.41	.49
Educators can benefit from reputational benefits recognition	3.60	.49
Educational institutions can benefit from recognition and enhanced reputation	3.55	.50
Educational institutions can benefit from wider availability of their academic content linking to widening participation agenda	3.53	.50
Educational institutions can benefit from increased sharing of ideas and practice within the institutions	3.51	.49
Increased understanding of curriculum development and learning technologies is an impact of OER	3.59	.48
Learners can benefit from the opportunity to collaborate approaches to teaching and learning	3.49	.50
Average mean	3.54	.48

Entries in Table 2 revealed that students accepted all the items as the impact of open educational resources for students. This is because all the item mean was above the criterion mean of 2.5. An overall mean of 3.54 suggests that applying knowledge in a wider

context than their course would otherwise allow freedom of access and enhance opportunities for learning.

Research question 3: What are the problems with open educational resources?

**Table 3**  
Problems of Open Educational Resources

Items	M	SD
Since open educational resources repositories allow any user to create an account and post materials, some resources may not be relevant or accurate	3.66	.47
Lack of human interaction between teachers and students	3.24	.42
Language and/or cultural barriers	3.49	.50
Some students may have trouble using some OERs if they have a slow internet connection	3.26	.44
Since OER creators generally do not receive any type of payment for their OER, there may be little incentive for them to update their OER or to ensure that it will continue to be available online	3.36	.45
Adopting OERs in the classroom involves additional work on the part of the school, instructional designers, editors, digital rights specialists, and others in order to find OERs, adapt/modify them, check them for accessibility, verify any copyright issues, publish the resources in the institutions learning management system.	3.54	.50
Some OERs are published in digital formats that make it hard to download, access and modify the content	3.29	.45
OER may not be updated as frequently as the education community might like	3.38	.48
Creating and/or locating existing open educational resources can be extremely time-consuming	3.40	.49
Open educational resources may be produced with little added support for copy-editing and design	3.52	.50
Average mean	3.41	.47

Entries in Table 3 revealed that students accepted all the items as the problems of open educational resources. This is because all the item mean was above the criterion mean of 2.50. An overall mean of 3.41 suggests that since open educational resource

repositories allow any user to create an account and post materials, some resources may not be relevant or accurate.

Research question 4: What are the types of open educational resources used by students?

**Table 4**  
Types of Open Educational Resources

Items	M	SD	Rank
Open courseware	3.62	0.57	4th
Learning modules	3.64	0.57	2nd
Open textbooks	3.63	0.58	3rd
Streaming videos	3.58	0.59	5th
Open access journals	3.68	0.47	1st
Online tutorials	3.29	0.75	6th
Digital learning objects	2.60	0.32	8th
Radio Programs	1.90	0.80	9th
Plays	1.78	0.87	10th
Multimedia	3.26	0.75	7th
Average mean	3.09	0.62	

Entries in Table 4 revealed that students prefer the following types of open educational resources; open courseware ( $M = 3.62$ ;  $SD = .57$ ), learning modules ( $M = 3.64$ ;  $SD = .57$ ), Open textbooks ( $M = 3.63$ ;  $SD = .58$ ), Steaming videos ( $M = 3.58$ ;  $SD = .59$ ), Open access journals ( $M = 3.68$ ;  $SD = .47$ ), Online tutorials ( $M = 3.29$ ;  $SD = .75$ ), Digital learning objects ( $M = 2.60$ ;  $SD = .32$ ), and Multimedia ( $M = 3.26$ ;  $SD = .75$ ). An average mean of 3.09 suggests that students preferred the following ranked items; open access journals, learning modules, open textbooks, open courseware, streaming videos, online tutorials, multimedia and digital learning objects while students do not prefer the others.

### Discussion

Research question 1: What are the benefits of open educational resources?

The study found that students can access open educational resources anywhere in the world, at any time and open educational resources provide an excellent way for alumni to stay connected to the institution and continue with a program of lifelong.

The result of this study is in agreement with those of Krelja (2016), who found that open educational resources encompass any educational and research resources including curriculum map, course materials, entire and parts of e-courses, lessons plan, learning materials, textbooks, audio and video records, simulations, experiments, multimedia content, applications and games, and any other materials that have been designed for use in teaching, learning and researching that are openly available for use without an accompanying need to pay fees.

Research question 2: What are the impacts of open educational resources on students?

The result showed that applying knowledge in a wider context than their course would otherwise allow freedom of access and enhance opportunities for learning

This study's result agrees with those of Zhao et al. (2020) found that open educational resources are teaching and learning materials freely available for everyone to use and are typically open-licensed to allow for re-use and modification by instructors.

This study's result agrees with those of Manju and Bhatt (2021), who found that respondents are positive towards open educational resources and helped the students and researchers to perform better learning methods. It also helped increase the quality of education provided by open educational resources.

This study's result agrees with those of Sansom et al. (2021), who found that open educational resources are no-cost materials available in the public domain that students and instructors can use to reduce the financial burden of college coursework.

Research question 3: What are the problems with Open Educational Resources

The result showed that since open educational resources repositories allow any user to create an account and post materials, some resources may not be relevant or accurate.

The result of this study agrees with those of Roza (2017), who found that many teachers assume that they are freely allowed to use materials made publicly available on the internet in their courses and at their institution. Teachers might not always have the right to download, save, print, or email files from the internet to students or colleagues.

This study's result agrees with those of Jeelani et al. (2015), who found that the paucity of higher-quality teachers, the inadequate infrastructure of the universities and, more specifically, their libraries, and the poor quality of educational resources utilized at various universities and colleges.

Research question 4: What are the types of Open Educational Resources students prefer?

The result showed that students preferred the following ranked items; open-access journals, learning modules, open textbooks, open courseware, streaming videos, online tutorials, multimedia and digital learning objects.

The result of this study is in agreement with those of Peppino et al. (2019), who found that audio, general search engines, images, texts, video, course materials and learning modules are the types of open educational resources students prefer.

### Conclusion

The researchers made the following conclusion:

1. The study found that students can access open educational resources anywhere in the world, at any time and open educational resources provide an excellent way for alumni to stay connected to the institution and continue with a program of lifelong.
2. Applying knowledge in a wider context than their course would otherwise allow freedom of access and enhanced learning opportunities.
3. Since open educational resource repositories allow any user to create an account and post materials, some resources may not be relevant or accurate.
4. Students preferred the following ranked items; open-access journals, learning modules, open textbooks, open courseware, streaming videos, online tutorials, multimedia and digital learning objects.

### Recommendations

Based on the conclusions, the researchers made the following recommendations:

1. Students and stakeholders should participate fully in open educational resources to stay connected to their institutions.
2. More knowledge should be applied widely to allow access and opportunities to students and disabled ones.
3. It is recommended that not all users should create and post materials.
4. More types of open educational resources should be used to facilitate open educational resources benefits to all.

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