IJIET, e-ISSN 2548-8430, p-ISSN 2548-8422, Vol. 4, No. 2, July 2020

International Journal of Indonesian Education and Teaching
http://e-journal.usd.ac.id/index.php/IJIET
Sanata Dharma University, Yogyakarta, Indonesia

OER AWARENESS AND USAGE AMONG OPEN AND DISTANCE LEARNING STUDENTS IN SOUTH-WESTERN NIGERIA

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https://doi.org/10.24071/ijiet.v4i2.2643
received 9 June 2020; accepted 19 July 2020

Abstract
This study assessed Open Educational Resources (OER) awareness level and usage among Open and Distance Learning (ODL) students in South-western Nigeria. A descriptive research design was adopted for the study. Three ODL institutions (University of Ibadan Distance Learning Centre, National Open University of Nigeria, Ibadan Study centre and University of Lagos Distance Learning Institute) were purposively selected. A structured questionnaire titled "OER awareness and usage Questionnaire" with Cronbach alpha coefficient of .954 was used as data collection instrument. Data collected were analysed using frequency count, simple percentages, mean, standard deviation and Pearson Product Moment Correlation. Results of the study revealed that OER awareness among ODL students was on the average while OER usage was high. Lack of orientation on the availability and use of OER and insufficient ICT facilities in the school to access OER materials, amongst others were challenges ODL students faced using OER. It was, therefore, recommended that there should be conscious efforts by ODL institutions to devise means to increase the level of OER awareness among students and sensitise them on the inherent benefits in OER usage.

Keywords: awareness, Open Educational Resources, open and distance learning, South-western Nigeria, usage

Introduction

Globally, education is a fundamental human right and a key to social, economic and other developments. The significance of education to national development cannot be overemphasised as it plays an important role in technological development and scientific orientation of any nation. It is a notable fact that no country can develop beyond the educational attainment of its citizenry. In the realisation of this fact, the Nigerian government has been making a concerted effort at harnessing the potentials inherent in education for optimal social and economic development. While much has been done in terms of educational provision generally, much remains to be done in terms of access, infrastructure and most especially, quality of the educational system (Otonko, 2012).

Nigeria is one of the most populous nations in Sub-Saharan Africa with a population of over 200 million and over 200 ethnic groups occupying a landmass of 910,770 square kilometres (Worldometers, 2017). Providing quality education to this teeming population within a fast dwindling of the nation's financial resources poses a serious challenge. Also, due to the astronomical increase in population and the low carrying capacity of the existing formal education system, there is an increase in demand for education, most especially higher education. The conventional regular educational system has become inadequate in meeting the demand of the people. The low capacity of these regular universities to accommodate the enormous number of prospective students, non-consideration of the working-class set of people and those geographically disadvantaged are some of their notable limitations. Moreover, some issues have been raised against the conventional university system such as being costly to establish and maintain, not elastic and pliant enough. All these provide the impetus for agitation for equal opportunity to university education through open distance education (Biao, 2012).

Open and distance learning essentially means an instructional strategy that uses different approaches to learning. It is different from the traditional face-to-face model of learning. Worthy of note is the emphasis on learning landscape where the instructor and the students are separated physically using a multiplicity of technologies. This type of learning tends to be more cost-effective, and time, location, pace and space independent (Jegede, 2016). Open distance learning provides learning opportunities to many people across regions of the world irrespective of geographical location. Consequently, this gives room for learners to engage in learning activities in a place, time, and space that fit their circumstance and requirements. Open distance education emphasises opening up learning opportunities by disabling challenges resulting from geographical location, job responsibilities and inflexibility in course structures associated with conventional education which often limit people's participation in educational opportunities (Biao, 2012). The concept of open and distance learning echoes either total or great part of learning process that takes place in an environment where the learner is not in the vicinity of the teacher with the sole aim of bringing a higher dimension of flexibility and openness in the areas of access, course structure or general curriculum (Ghosh, Nath, Agarwal & Nath, 2012).

However the acceptance of open distance learning as a way of providing massive access to university education, increasing learning flexibility and making university education more affordable for all, it has its peculiar challenges. These challenges include; the absence of national ODL policies outlining ODL pathways, scepticism about the quality of open distance learning products and aspersion on the relevance of open distance learning programmes. Also, lack of personnel with adequate knowledge in the principles, idea and methods of ODL and low level of ICT utilisation within the domain of open distance learning are factors identified to be confronting ODL system (Biao, 2012). Equally, learners on the open and distance learning programmes have been seen to face many challenges ranging from situational problems - job and home responsibilities, institutional related -poor infrastructure and others, as well as dispositional challenges - age, learning style, marital status (Ibrahim and Silong, n.d.).

Musingafi, Mapuranga, Chiwanza and Zebron (2015) identified insufficient time for study, hitches in ICT access and use, ineffectual feedback mechanisms and inadequate study materials as the challenges ODL students face in their course of study.

Interestingly, the advent and continuous improvement in communication technologies and the constant drive by stakeholders in the open and distance learning domain of university education have reduced some of the challenges learners face under the ODL instructional delivery. This has increased the accessibility to educational resources, thus improving learning and providing an abundance of such resources to learners in a notable manner. This way, they can learn at their own pace, space and convenience, thereby enhancing their learning experience. Technological development, particularly the internet, combined with the availability of more computer applications and tools have made a paradigm shift possible from a scarcity of learning resources to its abundance. Resources such as full course materials, textbooks, course modules, videos, application software and related tools, amongst other materials and techniques used in supporting access to information are generally known as educational resources. Educational resources are in two forms- conventional and open educational resources. The distinguishing factor between the two is that while the conventional educational resources have restricted access and limited coverage, OER is open, easily accessible to people across the world, and available to be used, reused, and adapted without any permission from the owner.

In the contemporary world, the emergence of OER has significantly become popular as it has become a subject of keen interest among scholars, practitioners and educational institutions and this has led to the exploration of the concept and the inherent potentials towards improving the level of education around the world. A notable educational movement recognised in this 21st century is OER (Shear, Means & Lundh, 2015). The concept of OER is defined in several ways but what remains essential in all the definitions is the fact that the resources are available at no cost or barest minimum to users. For instance, UNESCO (2002, as quoted in Willy, 2007) defines Open Educational Resources as:

> "Technology-enabled, open provision of educational resources for consultation, use and adaptation by a community of users for non-commercial purposes". They are typically made freely available over the Web or the Internet. Their principal use is by teachers and educational institutions support course development, but they can also be used directly by students. Open Educational Resources include learning objects such as lecture material, references and readings, simulations, experiments and demonstrations, as well as syllabi, curricula and teachers' guides" (Willey, 2007, p. 3).

Hewlett Foundation (2016) sees Open Educational Resources as "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". Similarly, Reed Library (n.d) defined Open Educational Resources

(OER) as "teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property license that permits repurposing by others". Butcher (2015) described OERs as "any educational resources (including curriculum maps, course materials, textbooks, streaming videos, multimedia applications, podcasts, and any other materials designed for use in teaching and learning) that are openly available for use by educators and students, without an accompanying need to pay royalties or licence fees". In whatever way OER is defined, its importance to teaching and learning process in the 21st century cannot be overemphasised as it provides the opportunity for students to have access to course materials with no attached cost. Also, it allows lecturers to create learning materials that are specifically designed for their classes, and this strengthens their base of knowledge. Also, with the opportunity to draw from a wide variety of materials from different sources, the student is provided with affordable materials that enhance their learning and give the lecturers content for classes (Canvas. n.d.). According to Wiley (n.d.), OER provides learners with free and long-lasting access to "engage in the '5R' activities - retain, reuse, revise, and remix and to redistribute" educational resources.

Specifically, Open Educational Resources have been created not solely to strengthen Open and Distance Learning through the establishment of a knowledge pool for developing useful courseware, but also to empower and build institutions' capacity to participate effectively in creating the open courseware. According to Jena (n.d), Open Educational Resources have the potentials to facilitate Open and Distance Education by serving as a source of learning content, initiating an e-learning platform, promoting learning content licensed under the creative commons, establishing a forum for professionals, creating a form of consortium for courseware development and enhancing the professional growth of ODL institutions. Through the creation of free learning contents like modules, learning objects, courseware, journals in collaborative support of the virtual community having a common interest, the physical distance between the lecturer and students of ODL would be drastically reduced. Also, OER facilitates all components of e-learning be it online learning, students assessment process, admission and other administrative issues. Again, since Open Educational Resources are freely made available, and their use as well as adaptation encouraged under the creative commons license, this allows the materials to be reused in open courseware and other educational product. This, therefore, strengthens the ODL system most notably in developing countries of the world. Furthermore, with the support of online communities, the ODL system gets enabled through Open Educational Resources created to establish forums of professional discussion not only within the boundary of a country but beyond. Finally, since ODL institutions are established to meet the educational needs of disadvantaged groups, OER enables the enhancement of personal knowledge of both the learners and lecturers through effective planning and active support of information communication technology (Jena, n.d).

Several studies have been carried out to examine OER awareness, impact, usage, and adoption among different categories of learners in different parts of the world (Akomolafe & Adegun, 2014; Li & Huang, 2015; Onaifo, 2016; Cooney,

2017; Ikahihifo, Spring, Rosecrans & Watson, 2017; Gambo and Aliyu 2017; Petiska, 2018; Haas, Ebner & Schon, 2018; Grimaldi, Mallick, Waters & Baraniuk, 2019; Pounds & Bostock, 2019; Arunkumar and Kannan, 2020). Specifically, in Nigeria, Akomolafe et al. (2014), examined the utilisation of open educational resources among undergraduates in Nigerian's universities while Onaifo (2016), investigated the use of OER among University of Lagos' students. Similarly, Gambo et al. (2017) assessed the use of open educational resources and printed educational materials among students of federal college of education Katsina, Nigeria. There is, however, a dearth of empirical studies on OER awareness and usage among open and distance learning students in Nigeria and this is the gap the current study intended to fill by examining the level of OER awareness and usage among open and distance learning students in South-western Nigeria. There are three research questions in this research. First, what is OER awareness level among ODL students in South-western Nigeria? Second, what is OER usage level among ODL students in South-western Nigeria? Third, what are the challenges faced by ODL students using OER?

Method

This study adopted a descriptive research design, with a population which consisted of students learning under the open and distance learning programmes domiciled in South-western Nigerian universities. Three ODL institutions (University of Ibadan Distance Learning Centre, the National Open University of Nigeria, Ibadan Study centre and University of Lagos Distance Learning Institute) were purposively selected based on having their interactive session during the period this study was conducted. A sample of 1000 ODL students were selected using a simple random sampling technique. A structured questionnaire titled "OER Awareness and Usage Questionnaire" was validated by ODL experts and pilot-tested among the University of Ibadan regular students and .954 Cronbach's Alpha coefficient was obtained for the questionnaire. One thousand (1000) copies of the questionnaire were distributed to students across the institutions under study, but only 523 were filled correctly and only these were analysed (UI DLC – 198, UNILAG DLI – 138 and NOUN- 187). Data collected were analysed using frequency count, simple percentages, mean, standard deviation and Pearson Product Moment Correlation. The OER awareness and usage level were determined using the following criteria; weighted average ≤ 2= Low, $>2 \leq 3$= average and >3= high.

Findings and Discussion

Findings

***RQ 1*:** What is OER awareness level among ODL students in South-western Nigeria?

Table 1: OER Awareness Level among ODL students

Items		Very Aware (%)	Aware (%)	Unaware (%)	Very Unaware (%)	Mean	SD
1	Are you aware	166	222	112	23	3.02	.84

Items		Very Aware (%)	Aware (%)	Unaware (%)	Very Unaware (%)	Mean	SD
	of the term OER	(31.7)	(42.4)	(21.4)	(4.4)		2
2	Are you aware that OER are free to use	117 (22.4)	246 (47.0)	133 (25.4)	27 (5.2)	2.87	.81 7
3	Do you know that many OER are created by instructors from respected and well-known schools across the world	106 (20.3)	229 (43.8)	169 (32.3)	19 (3.6)	2.81	.79 7
4	OER are on YouTube	90 (17.2)	186 (35.6)	219 (41.8)	28 (5.4)	2.65	.82 5
5	There are so many OER available to support learning	139 (26.6)	239 (45.7)	121 (23.1)	24 (4.6)	2.94	.82 4
6	Some OER are produced locally	73 (14.0)	209 (40.0)	216 (41.3)	25 (4.8)	2.63	.78 0
7	I can find OER in the library	96 (18.4)	207 (39.6)	194 (37.1)	26 (5.0)	2.71	.82 0
8	I can find OER using my mobile phone	143 (27.3)	249 (47.6)	110 (21.0)	21 (4.0)	2.98	.80 3
9	I can access OER from anywhere	142 (27.2)	224 (42.8)	139 (26.6)	18 (3.4)	2.94	.82 0
10	OER are easy to find online	137 (26.2)	242 (46.3)	123 (23.5)	21 (4.0)	2.95	.81 0
11	OER are available in video and audio format	127 (24.3)	219 (41.9)	152 (29.1)	25 (4.8)	2.86	.84 0
12	Finding OER to use is made easier by my school	113 (21.6)	238 (45.5)	146 (27.9)	26 (5.0)	2.84	818
13	OER can be accessed through social network platforms	123 (23.5)	245 (46.8)	137 (26.2)	18 (3.4)	2.90	.79 2
Weighted average= 2.85							

Table 1 above revealed the open education resources awareness level of open and distance learning students in South-western, Nigeria. It can be deduced from the table that ODL students' awareness of OER is at the average based on the weighted average of the mean score. It was revealed that 42.4% of the respondents are aware of the term OER and majority of them attested to the fact that OER is unrestricted to use thereby reducing the cost of learning (47%). It was also revealed that majority of the respondents are aware that OER is created by instructors from respected and well-known schools across the world (43.8%); OER are available everywhere, and it can be accessed using a mobile phone (47.6%). They are aware that it can be found online (46.3%) including the social network platforms (46.8%) and are available in both audio and video format (41.9%). However, it was revealed that a larger percentage of the respondents are unaware that OER is on YouTube (41.8%) and that some of the OER are locally produced (41.3%).

RQ 2: What is OER usage level among ODL students in South-western Nigeria?

Table 2. Level of OER Usage among ODL Students

S/N	Items	Strongly Agree (%)	Agree (%)	Disagree (%)	Strongly Disagree (%)	Mean	SD
1	I would describe using open educational resources to support my learning as interesting	147 (28.1)	343 (65.6)	20 (3.8)	13 (2.5)	3.19	.618
2	I feel more engaged with learning using OER.	170 (32.5)	310 (59.3)	29 (5.5)	14 (2.7)	3.22	.665
3	My learning experience has been greatly improved upon using OER	168 (32.1)	297 (56.8)	45 (8.6)	13 (2.5)	3.19	.688
4	I see OER as not being good compared to purchased textbooks	100 (19.1)	182 (34.8)	220 (42.1)	21 (4.0)	2.69	.823
5	I use open educational resources to do my assignments	119 (22.8)	294 (56.2)	88 (16.8)	22 (4.2)	2.98	.751
6	OER enhances my comprehension	119 (22.8)	293 (56.0)	91 (17.4)	20 (3.8)	2.98	.745

S/N	Items	Strongly Agree (%)	Agree (%)	Disagree (%)	Strongly Disagree (%)	Mean	SD
	of what is taught in my formal classes						
7	I learn better from using OER	102 (19.5)	290 (55.4)	110 (21.0)	21 (4.0)	2.90	.74 7
8	OER enables me to learn at my own pace	152 (29.1)	294 (56.2)	60 (11.5)	17 (3.3)	3.11	.72 4
9	OER help me prepare for classes	131 (25.0)	307 (58.7)	67 (12.8)	18 (3.4)	3.05	.71 7
10	OER enables me to prepare for tests and exams	155 (29.6)	283 (54.1)	65 (12.4)	20 (3.8)	3.10	.75 2
11	I use OER to gain current information in my area of study	157 (30.0)	291 (55.6)	58 (11.1)	17 (3.3)	3.12	.72 6
12	I use OER to update my knowledge on a particular topic or area of research	153 (29.3)	299 (57.2)	53 (10.1)	18 (3.4)	3.12	.71 9
13	I use OER for personal study	148 (28.3)	288 (55.1)	65 (12.4)	22 (4.2)	3.07	.75 6
14	I see others using OER to aid their learning	150 (28.7)	291 (55.6)	65 (12.4)	17 (3.3)	3.10	7.3 0
15	I use OER to Supplement my study materials	154 (29.4)	295 (56.4)	52 (9.9)	22 (4.2)	3.11	.74 2
Weighted Average= 3.062							

Table 2 showed that Open educational resources usage among open and distance learning students in South-western Nigeria is high, as reflected in the weighted average of the mean score. ODL students agreed with the fact that using open educational resources makes their learning interesting (65.6%), make them feel more engaged (59.3%) and directly improve the quality of their learning experience (56.8%). They further stated that they use open educational resources to do their assignments (56.2%); use it to complement what they learn in their formal classes (56%) and overall, learn better from using OER (55.4%). It was also revealed that they agreed that OER enables them to learn at their own pace (56.2%), help them prepare for classes (58.7%), enable them to prepare for tests and examinations (54.1%) as well as use OER to gain current information in their

area of study (55.6%). It was also reported that they use OER to update their knowledge on a particular area of research (57.2%), use OER for personal study (55.1%) and as a supplement to their study materials (56.4%). However, they disagreed with the statement that Using Open educational resources are not as good as purchased textbooks (42.1%).

RQ 3: What are the challenges ODL students face using OER**?**

Table 3. Challenges ODL students face using OER

S/N	Items	Strongly Agree (%)	Agree (%)	Disagree (%)	Strongly Disagree (%)	Mean	Rank
1	Insufficient ICT facilities in the school to access OER materials	168 (32.1)	230 (44.0)	100 (19.1)	25 (4.8)	3.03	2nd
2	Lack of orientation on the availability and use of OER to support learning	175 (33.5)	227 (43.4)	97 (18.5)	24 (4.6)	3.06	1st
3	Difficulty in locating relevant OER materials	135 (25.8)	218 (41.7)	135 (25.8)	35 (6.7)	2.87	6th
4	Erratic Power supply	155 (29.6)	222 (42.4)	112 (21.4)	34 (6.5)	2.95	4th
5	Poor internet access	182 (34.8)	207 (39.6)	98 (18.7)	36 (6.9)	3.02	3rd
6	Inadequate/Lack of ICT skills to search for needed OER materials	139 (26.6)	227 (43.4)	122 (23.3)	35 (6.7)	2.90	5th
7	The problem of finding suitable resources in my subject area	119 (22.8)	216 (41.3)	148 (28.3)	40 (7.6)	2.79	7th
8	Overload of information	119 (22.8)	187 (35.	166 (31.7)	51 (9.8)	2.72	8th

S/N	Items	Strongly Agree (%)	Agree (%)	Disagree (%)	Strongly Disagree (%)	Mean	Rank
	on the Internet		8)				
9	My school library does not have such access for student	107 (20.5)	159 (30.4)	196 (37.5)	61 (11.7)	2.60	9th

Table 3 showed that based on the ranking of the mean score, lack of orientation on the availability and use of OER to support learning is the major challenge ODL students faced using OER, followed by insufficient ICT facilities in the school to access OER materials. Others are poor internet access, erratic power supply, inadequate/lack of ICT skills, difficulty in locating relevant OER materials, the problem of finding suitable resources, an overload of information on the internet and the institutions' library restricted access for student as they ranked 3rd, 4th, 5th, 6th, 7th, eighth and ninth respectively.

Hypothesis

H01: There is no significant relationship between OER Awareness and Usage among ODL students in South-western Nigeria

Table 4: Pearson Product Moment Correlation showing the relationship between OER Awareness and Usage among ODL students in South-western Nigeria

Variables	Mean	Std. Dev.	N	r	P =Value	Remark
OER Awareness	37.08	7.732				
			523	.398**	.000	Sig
OER Usage	45.93	7.180				

Discussion

The study revealed that open and distance learning students in south-western Nigeria have an average level of OER awareness. This could be attributed to the fact that the term is just gaining popularity among scholars and students in Nigeria generally and what constitutes OER is not well understood by both faculty members and students as most universities in the country are just fashioning out a policy on OER creation and use. While most Open and distance learning students interact with different materials online or in the library freely to support their learning, their level of awareness of the material within the OER framework is on

the average. This finding lends credence to the submission made by Babson Survey Research Group (as cited in Mckenzie, 2017) that generally, OER awareness is still very low, but there is a steady increase in the level of OER awareness as people are choosing open educational resources over textbooks. It was further stated that OER is new, and any invention is bound to face a difficult battle as change does not occur overnight. It was, therefore, suggested that to help users to find and evaluate OER content, librarians have a significant role to play. The result of this study, thus further confirms the earlier work of Kumar and Raja (2019) who found in their study that OER awareness level among higher education students is moderate.

For the level of OER usage among open and distance learning students in South-western Nigeria, the result of the study revealed that OER usage among students is high. The students stated that using open educational resources makes their learning interesting; gets them more engaged and directly improves the quality of their learning experience. They indicated that OER is used in doing their assignments, and highly used to complement what they learn in class. Generally, they attested to the fact that OER enable them to learn at their own pace and convenience. It also helps them prepare for classes, and mainly serves as supplementary materials to their course modules. They rated open educational resources having equal or higher relevance due to its free and easily accessible nature. This finding is evident from the opportunity OER afford learners with regards to access to a wide array of learning materials that can be used to complement course modules given to them at no extra cost, most especially distance learners who hardly have direct interaction with lecturers and are confined to course modules given to them. This lends credence to the recognised value of OER as providing an opportunity for self-tailored learning, improved learning experience and proper use of resources which promote even-handedness in learning as learners can learn anytime and anywhere using any technological device. OER expose students to different educational resources that are in line with their learning style, thus helping them become active participants in the educational process through collaboration in virtual learning communities and more importantly, OER reduces the cost of accessing learning materials which makes its usage very high (Kurelovic, 2015).

On the challenges open and distance learning students face using OER, the result of the study showed that lack of orientation on the availability and use of OER to support learning and insufficient ICT facilities in the school to access OER materials ranked first and 2nd as significant challenges ODL student face using OER. Other challenges identified include poor internet access, erratic power supply, and lack of ICT skills to search for needed OER materials amongst others. This result corroborates the findings of Akomolafe et al. (2014), who in their study titled "utilisation of open educational resources and quality assurance in universities in Nigeria" found out that ignorance of OER online facilities, poor internet network, erratic electricity and unfamiliarity with OER websites are significant challenges of using OER among undergraduate students in South-western Nigeria. Also, Gambo and Aliyu (2017) reported in their study that delay in internet connectivity, power outage and difficulties in locating relevant

materials in browsing OER are challenges students in colleges of education in Nigeria face using OER. Similarly, Mwinyimbegu (2018) found out that lack of awareness on OER existence, lack of policy guiding OER use, inadequate bandwidth and the fact that lecturers do not recommend OER are the major challenges hindering OER promotion and usage among Tanzanian librarians.

On the relationship between OER awareness and usage among ODL students in South-western Nigeria, the result of the study indicated that there is an existence of a significant positive relationship between OER awareness and usage among ODL students. The implication of this is that as the level of OER awareness increases, likewise, the level of OER usage will increase among the open and distance learning students. It, therefore, means that the higher the level of knowledge and understanding of OER, the higher the chances of Distance learning students' use of OER.

Conclusion

This study has tried to fill the research gap on the OER awareness and usage among open and distance learning students in South-western Nigeria. The results of the study revealed that OER awareness among ODL students is at an average level, but OER usage is somewhat high. The results further showed that lack of orientation on the availability and use of OER to support learning and insufficient ICT facilities in the school to access OER materials amongst others are the challenges ODL students face using OER. It was further established in the study that there exists a significant relationship between OER awareness and usage among the students. Conclusively, OER presents an ample opportunity for distance learning students to have access to different materials made available by different experts across the world to complement their course modules but the higher their level of OER awareness, the higher the level of OER usage.

Based on the results of the study, the following recommendations were made;

1. There should be conscious efforts by ODL institutions to device means to increase the level of OER awareness among students and sensitise them on the inherent benefits in OER usage.
2. Adequate orientation on OER availability in the institutions and ways to access them should be given to open and distance learning students, so as to increase their level of understanding about it.
3. Required ICT facilities for easy access to OER materials, including reliable internet, should be provided by ODL institutions to increase the level of OER usage among the students.
4. Further studies on OER awareness and usage in Nigeria should endeavour to have more sample size across the geopolitical zones for better generalisation for the country.

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