

Open Educational Resources (OER) usage in learning: Perspectives of undergraduate students, University of Vocational Technology, Sri Lanka

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Abstract- Open Educational Resources has gained momentum during the past decade as a way of sharing educational resources with the learning community. This initiative has been very influential in changing the learning culture of higher education worldwide. However, there is a dearth of literature on OER usage, particularly among higher education students in developing countries, despite the fact that, higher education students in developing countries are portrayed as the primary beneficiaries of such initiatives. The aim of this study was to examine the awareness and perceived barriers of using OERs at the University of Vocational Technology. Data were gathered using a survey questionnaire from undergraduate students representing ICT and Food Technology degree programs (n=150). The findings revealed that a significant proportion of students were having less awareness of OER. It was observed that students face many barriers in using OER such as search techniques, content and environmental issues. According to the study, university and faculty members should take the lead in practice and dissemination of the concept of OER among students in order to encourage adoption of this valuable initiative.

Keywords — *Open Educational Resources (OER), student perception, barriers in OER*

I. INTRODUCTION

The emergence of Open Educational Resources (OER) is one of the most significant educational innovations in recent developments of open education[9][10]. OER is a relatively new concept in the field of Open Education, defined by UNESCO 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." [11] The recent definition proposed

by the Organization for Economic Cooperation and Development (OECD) is "digitized materials offered freely and openly for educators, students, and self-learners to use and reuse for teaching, learning, and research." [10]

OER is originated from the common and widespread practice of creating and sharing learning resources where MIT's Open Courseware (OCW) project is frequently cited as the first example of OER. Since then, OCW has grown rapidly in both developed and developing countries [1][3] In 2017, UNESCO hosted the second World OER Congress, which resulted in OER action plan [12]. This policy recommended OER focus to its member countries as an enabler of open education towards innovative education and pedagogical strategy. The goal is to increase stakeholder capacity to create, use, adapt, and redistribute open educational resources (OER); develop supportive OER policy; encourage the development of inclusive and equitable quality OER; foster the development of OER sustainability models; and facilitate international cooperation on OER.

OER is still a relatively new concept in the Sri Lankan education system. In 2017 on par with the introduction of sustainability bill in line with United Nations' Sustainable Development Goals, adoption of OER for teaching and learning is promoted as sustainable education practice. Open University of Sri Lanka had been pioneering in introducing OER concept to the country, where several studies have been conducted to promote OER adoption by practitioners[5] According to Karunanayaka, Fernando & De Silva [6] practitioners' awareness of OER was extremely low, but their readiness and motivation to adopt the concept was seen quite high.

Previous research has emphasized the importance of establishing close collaboration between researchers and practitioners in awareness-raising and capacity-building initiatives, as well as the importance of designing appropriate

experiences in a systematic manner [6] Existing literature, however, fails to provide sufficient evidence on the utilization of OER among student groups in Sri Lanka. Therefore, aim of this research is to investigate the awareness and perception of using OER among undergraduate students of Sri Lanka.

II. OBJECTIVES

The objective of this research is to investigate the awareness and perception of using OER among undergraduate students of the University of Vocational Technology, Sri Lanka.

III. METHODOLOGY

The target population was undergraduate students in University of Vocational Technology, Sri Lanka. Student groups of two degree programs of the University of Vocational Technology were selected as the sample. A total of 150 students were selected from two degree programs as per the convenient sampling method. The survey was done using online methods by posting questions using Google web form.

To identify undergraduate students' awareness and perceptions on OER survey instrument was developed based on the OCED's definition on OER (2007) and adapted version of survey items developed by Hu, E. et al [4]

The survey instrument included eight items. Demographic data were gathered in the first part and OER usage was investigated using five items indicating, OER usage experience, Where OER information received, purpose of OER usage, Frequency of using OER, Frequently used OER content, and Barriers /Issues in using OER is queried using open-ended question and focus group discussion. The data obtained were analyzed using descriptive statistics.

IV. RESULTS AND DISCUSSION

Among the 150 students who participated for the survey 82(55%) were male students and 68 (45%) were female, 80 (53%) were from ICT degree and 70 (47%) were from Food Technology degree,26 (17%) were first years students, 45 (30%) were second year students and 79 (53%) were from third year students. The table 01 shows the details of participants' distribution in terms of demographical variables of gender, Degree and academic year.

Table 1: Respondent demographics (n=150)

Personal characteristics	Sample	Percent (%)
Gender		
Male	82	55%
Female	45	30%
Degree Programme		
B.Tech ICT	80	53%

B.Tech FT	70	47%
Academic Year		
Year 01	26	17%
Year 02	45	30%
Year 03	79	53%

Awareness and OER usage patterns of undergraduates are summarized in Table 2. As per the survey results, only 29% of respondents had experience in using OER.and the majority of respondents had no experience in OER usage. (71%) Among the 29% of the students who have OER experience, indicated they got to know about OER via other students (50%),by search engines (27%) and though Faculty members (23%).With regard to the purpose of using OER 68% students indicated that they used OER for their personal needs, 11% used to get content of other disciplines, 9% used OER to view and listen to other scholars' work.

In terms of frequency of OER usage, 59% indicated that the frequency vary with the requirement. 27% used OER weekly. only small percentage of students (5%) used OER daily. With respect to mostly used OER content, it was noted that video was the most popular with 57%, while 23% listed text discussions 9% and other content 11%.

Table 2 : OER usage of undergraduate students

OER usage status	Number	Percent(%)
OER usage experience		
Have OER usage experience	44	29%
Have no OER usage experience	106	71%
Channel to get to know OER		
Search engine	12	27%
Other students	22	50%
Faculty members	10	23%
Purpose of using OER		
To assist personal learning	30	68%
To get to know content in other disciplines	5	11%
To view other scholars' work	4	9%
Frequency of using OER		
Monthly	4	9%
weekday	12	27%
daily	2	5%
As per the requirement	26	59%
Most frequently used OER content		
Video	25	57%
Text	10	23%
Online messaging and discussions	4	9%
Other contents	5	11%

Perceived barriers to OER usage:

Students perceived several barriers to using OERs, including a lack of understanding of what OERs are and their usability. Many students have stated that they have used some form of OER without fully comprehending its benefits. Faculty members have not encouraged students to use OER for learning and information on OER are not readily available to the undergraduate students

Some students were resistant to learning through online means. Those who are aware of OERs claim that there are few repositories that provide high-quality learning materials and are difficult to find such. There are only a few subjects and disciplines covered, and not sufficient learning material present. Also there was no suitable platform to communicate and interact on the websites of OER.

Based on the analysis of students' perceived barriers to using OERs, it is strongly recommended that university should promote the OER initiative to raise student awareness. The advisory role of faculty members, in particular, is highly recommended. Many students had no idea how to look for OER in their subject discipline. To narrow this gap, providing an OER database to undergraduates is a good option.

V. CONCLUSION

According to the findings of this study, undergraduate students' awareness and use of open educational resources (OER) at University of Vocational Technology with reference to the two degree programs studied are at a bare minimum. Faculty members' contribution towards making students aware of OER and have taught students how to use them, were also less according to the findings. University should implement special initiatives to introduce OER to their students in order to broaden the influence of OER and effectively advance quality education.

Furthermore, the findings of this study should inform university authorities about potential barriers to using OER and help them develop strategies to overcome these barriers in the context of the institutional environment. As suggested in focus group discussions, awareness sessions, faculty member involvement, creating OER database may help in minimizing potential barriers of using OER among students.

Because the scope was limited to an exploratory study of two degree programs at one university, the findings cannot be generalized. A discipline-specific instrument, which was not considered in this study, may also reflect more authentically and effectively on students' actual perceptions of OER usage.

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