
Awareness and the use of Open Educational Resources (OERs) among Academics and Students in Teaching-Learning process: A case study at Faculty of Agriculture, University of Ruhuna, Sri Lanka

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Abstract

Open Educational Resources (OERs) are useful tools in teaching and learning process and are widely used throughout the world. It can be used to make the teaching learning process more effective in higher education and when the number of students is increasing day by day with limited resource capacity. Faculty of Agriculture, University of Ruhuna also has been using OERs since recently. However, no attempts has been made to evaluate to what extent the OERs are used by the students and academics. The present study was done to explore staff and students' awareness and attitudes towards OER as an effective tool to increase the quality of the university education. The objectives of this study were (1) to find out the available OERs in agriculture, (2) to assess the awareness on OER of stakeholders and (3) to evaluate the attitudes on using and sharing OER. Primary data were collected using a questionnaire survey and formal discussions. The analysis revealed that Agora and AIMS were the most important agriculture related OERs. The awareness about the OER among students was low compared with staff members. Majority of staff members preferred to upload their documents. Also most of students preferred to get lecture notes via web. Both, the staff and the students accepted OER as highly helpful for the academic purposes and to acquire the extra knowledge. The faculty administration can search possibilities for improving the facilities for e-learning using the OER facility.

Keywords: Agriculture, OER, University education

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Introduction

Open Educational Resources are educational materials that are in the public domain or introduced with an open license. The nature of these open materials means that anyone can legally and freely copy, use, adapt and re-share them. The OERs include full courses, course materials, modules, text books & any other materials or techniques to support access to knowledge. The OERs give the idea that one can learn or teach in a formal way such as registering a higher educational institute while informal education is not requiring any documentary of registration, just searching what they want.

Increasing number of students is a major problem in higher education in Sri Lanka. Though the number of students who has qualified to enter the universities is increasing each year, (University Grants Commission, 2011) the physical and human resources that are available for the higher education are not expanding at a sufficient rate to enroll all those who qualify for higher education. The Faculty of Agriculture (FOA), University of Ruhuna also suffers from insufficient laboratories, lecture halls and other facilities to cater the increasing rate of students. With the growing competitiveness between higher education institutes both nationally and internationally

and rapid technological development, the OER is one answer for above challenges. Availability of human resources may limit for large groups of students, as well as the cost per one student may reduce with introduction of the OERs. It reduces high cost of purchasing text books, cost of travelling. Hence, the OERs cut the cost of learning and break down the barriers to education.

As previously mentioned OERs are very effective tools to increase the quality of the university education. So it is better to have an idea about the awareness and attitudes of the students as well as the staff members towards OERs.

The objectives of this study were (1) to find out the available OERs in agriculture, (2) to assess the awareness on the OER of stakeholders and (3) to evaluate the attitudes on using and sharing the OER.

Materials and Methods

Faculty of Agriculture (FOA), University Of Ruhuna was selected for the study. All the staff members and all third year students at FOA were selected to measure the awareness and attitudes on OERs. Primary data were collected by questionnaire survey and formal discussions with both target populations while secondary

data were collected from research articles, journals, and other available literature.

IT based external courses followed, English knowledge, usage of electronic OER, usage of agriculture related electronic OER and the ability of symbol identification were used to assess the awareness on OER of students while awareness on the term OER, working experience, usage of electronic OER and symbol identification are used to analyse awareness on OER of staff members. Preferences for uploading documents, number of documents uploaded and types of documents uploaded are used to evaluate the attitudes of staff members. The preference of getting documents via web is used to evaluate the attitudes of students.

Data analysis was done using descriptive statistical tools such as percentages, graphs, frequencies and charts while the Wilcoxon Signed Rank test was used to analyze inferences.

Results and Discussion

The study revealed that there are available electronic based OERs in agriculture. The common agriculture related Electronic OERs were Access to Global Online Research in Agriculture (AGORA), Agriculture Information Management Standards (AIMS), Science Direct and Bentham Open Publishers.(FAO, 2013) When considering about the awareness of the students about OER, about 46% of students has heard about the term "OER" while half of the students didn't have exact idea about OER. Analysis revealed that there was no significant relationship between the use of OER and following of IT based external courses. Furthermore, there was no relationship between

English knowledge of the students and awareness on OER. Only 45% of students have used the Agricultural OERs and, of them many were female students. The Agora and the AIMS were the most popular agriculture based OERs among the students. However, all the staff members were aware about the OER and have used it. Most of them use Science direct. Analysis revealed that no significant relationship between the level of using OERs and the length of service period of the staff members implying that both senior and junior members use OERs and thus it can be popularized for undergraduate education. Table 1 shows the awareness of the students and staff of different symbols used in OERs.

According to the information given in Table-1, the level of awareness regarding some of the aspects is comparatively low among the students. It implies the need of more IT knowledge for the students to popularize OERs among the students.

The study evaluated the attitudes on using and sharing OER by students and staff. According to the data 68% of staff members prefer to upload their documents such as thesis, research papers, lecture notes and videos while some of them (32%) were not interested due to IPR status and the limitation of time. About 60% of staff members had uploaded their research articles while 32% had uploaded their lecture notes to the web. Considering preference of students for getting lecture notes via web, higher number of students preferred due to no compulsory attendance, ability to access any time, self learning, improve creativity, less cost, less time, able to do part time job while studying and easy

Table 1: Percentage of symbol identification by students and staff members

Symbol	Awareness of the Students (%)	Awareness of the staff Members (%)
© Copy right	31.5	52.6
CC Common Creative	18.7	52.3
BY: Attribute the work specified the author or the licensor	0	0
= No derivative works	8.75	21.05
\$ For commercial right	10.25	25.26
Ⓢ Non commercial	9.75	15.78

to copy and paste. (COMSATS, 2013) But a few students did not like to get lecture notes through web due to difficulties of understanding, access, getting practical knowledge. Other identified problems were high cost, possibility of reducing memory capacity and the reduction of interaction between the lecturer and student.

According to the analysis of the Wilcoxon Sign Rank Test, both students and academics agreed to statements "OER is highly helpful for the education", "OER increases the creativity of a learner", "it helps to gather the extra knowledge", "it supports to copy and paste", "difficult to log into some web sites due to requirement of confirmation", while disagreed on the statement of "OERs incur high cost".

Conclusion

Agora and AIMS were the most important agriculture related OERs. The awareness about OER among the students was low compared to that of staff. Majority of the staff members preferred to upload their materials for the use of students while the majority of the students preferred to get lecture notes via web. Both populations accepted OER as highly helpful for the academic purposes and to acquire the extra

knowledge while reducing the costs of learning compared to traditional teacher centered education. OERs can be used effectively and efficiently in agriculture education, if students are aware about the available OERs and how to use them at the beginning of the course and also by providing accessibility to OERs.

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