

Survey on Academic Staff Awareness of Open Educational Resources

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Abstract:

Open Educational Resources become an important asset for many educational institutions. In this paper we report the analysis of our survey data on using open educational resources at the University of Tripoli (UoT) among the academic staff members. The survey data was collected electronically to assess the awareness and usage of open educational resources within the University of Tripoli. Results of our survey reveal that 90% of academic staff members surveyed are using open educational resources, but they are not contributing much to OER due to lack of support from university.

Keywords: *Open educational resources; OER; open textbooks; open learning*

1. Introduction

Open Educational Resources (OER) are “materials used to support education that may be freely accessed, reused, modified and shared” (UNESCO 2011,2015). OER has received great attention in the past two decades. In 2012, UNESCO called on governments to adopt policies and support capacity development to promote the use of OER (UNESCO, 2012). OERs have been considered as one of the most significant educational movements in the 21st century (Shear *et. al.*, 2015). Institutions and governments have supported creating OER to aid learning and to lower educational costs for students (Florida Virtual Campus, 2012, Florida Virtual Campus, 2016; Jhangianiet. *al.*, 2017).

OERs have been reported to increase learning outcome. John Hilton (2016) surveyed 9 studies relating to the influence of OER on the learning outcomes. He reported that only one study had non-significant negative effects on learning outcomes, three others showed a significant improvement in favor of using OER, three studies showed no significance and the remaining two studies did not report any statistical measures. In a recent large-scale study on the impact of OER on student grades, results show that students who used OER textbooks significantly outperformed students who used traditional textbook (Colvardet. *al.*, 2018).

Recent trends in online education show a constant growth over years (Shah, 2019). A review of massive open online courses (MOOC) stats in 2018 reveals that the total student enrolments in such courses

exceeded 100 million students. By the end of 2018 the number of universities offering these courses passed 900 and the number of courses offered by these universities reached 11.4k with 2500 new courses added in 2018 (Figure 1).

CLASS CENTRAL

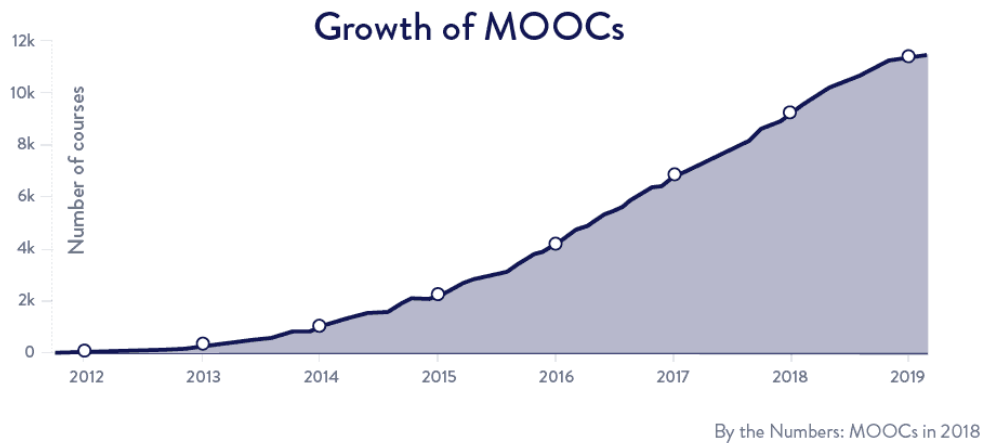


Figure 1: Growth of massive open online courses.

OERs can help resolve many issues in education. Access to textbooks is one issue: hard copies of books in the third world countries are not always available due to many factors such as shortage of books in those countries, lack of government support to using books, book prices are by far expensive compared with students family income, and lack of books in students' local language. A good example is the situation of higher education in Libya where most students rely more on lecture notes than textbooks. Instructors usually prepare learning materials (PPT presentations) and present them to students either electronically or in paper format.

Academic staff members can be considered as one of the main contributors to OER. Most freely accessed materials come from universities and research centers where teaching staff is the main composer. The lack of skills to use technology and the lack of academic recognition of the development of OER by the teaching staff are considered to form barriers towards gaining their benefits (D'Antoni, 2009).

The main objectives of this paper are to assess the awareness and the use of OER among the academic staff members at the University of Tripoli (UoT). We surveyed academic staff on the way they use OER in their teaching, the type of OER they use, whether they contribute any OER, and whether the University of Tripoli is supporting the use of OER.

In the following sections, we describe our methodology, participants, and results.

Methodology:

For the purpose of our study, a quantitative survey was developed. The survey questions were well designed to measure the use and attitudes toward using OERs.

The following research questions were used to guide the study:

1. Does the University of Tripoli provide the proper environment to academic staff to contribute to OER?
2. Are academic staff members using OER? (Yes/No)
3. What type of OERs are academic staff using? (tutorials, PowerPoint presentations, textbooks, video, audio, software tools)

4. What is the impact of using OER on students learning? (Low, medium, High)
5. Are university faculties providing any OER to students and staff?
6. Is academic staff creating any OER?
7. What factors could facilitate using OER? (Support from administration, recognition, academic quality, staff awareness, desire to reduce cost to students)

Participants

The University of Tripoli has more than 3000 academic staff members distributed across 20 faculties. All staff members are required to fill in a form when returning to work after the summer vacation. The survey targeted 2253 staff members who filled the return to work form in Fall 2017. A survey has been setup using the open source package LimeSurvey¹. Staff members were invited to participate using their registered email addresses. Reminders were sent three times after the initial invitation for those who did not respond. The package has been set up to disallow multiple responses by the same participant.

Responses:

We received a total of 601 responses. 43 responses were not complete and have not been considered in our evaluation. The following section shows statistics for our survey responses. We assumed that the background of participants would affect the responses of this survey. We

¹<https://www.limesurvey.org/>

expected to have more responses from people with technical backgrounds than those from social science background. However, responses were very well distributed across all faculties. The distribution of our participants and their responses based on their faculty is shown in Table1.

Table 1: Survey responses based on faculty. Total registered staff shows the number of staff targeted by our survey.

Faculty	No. Participants	Total Registered staff	Percentage
Science	35	178	20%
Engineering	84	286	29%
Agriculture	59	163	36%
Medicine	24	95	25%
Pharmacy	28	78	36%
Vet Medicine	32	79	41%
Physical Education	23	115	20%
Fine Arts and Media	16	77	21%
Dentistry	27	91	30%
Economy	52	199	26%
Law Tripoli	17	82	21%
Medical Technology	30	84	36%
Arts Tripoli	50	265	19%
Education Janzour	21	96	22%
Education Bin Ghesheer	19	108	18%
Nursing	0	1	0%
Education Tripoli	20	107	19%
Information Technology	23	29	79%
Languages	41	120	34%
Total	601	2253	27%

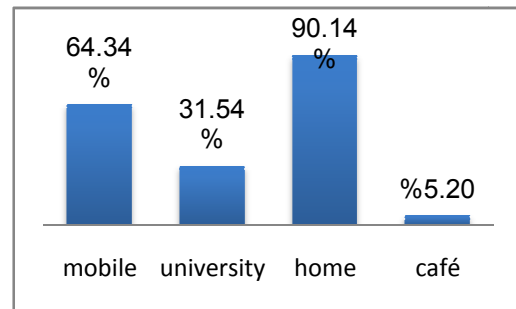
Table 1 shows that the total responses received counts for 27%. The number of complete responses used in our results is 558. This gives us a confidence level of 95% with error margin of 4.

Internet Connectivity:

To assess technical issues that affects OER development, we surveyed staff on Internet connection they use. Table 2 shows the Internet connection used by the survey sample.

Table 2: Internet connection used

Connection	<i>n</i>	Percentage
Mobile phone	359	64.34%
University	176	31.54%
Home	503	90.14%
Café	29	5.20%



Results show that lecturers use all available Internet connectivity options. However, the survey shows that they tend to use the Internet more at home (90.0%) than university (31.54%) with 64.34% of them use mobile phones to get connected. Only 5.2% of lecturers use Internet café to access the Internet.

It is worth mentioning that the university provides free Internet connectivity on main campuses but not to all campuses. However, there are no public places such as computer labs and libraries connected. In addition not all teaching staff members have access to Internet in their offices. This explains the low rate of using Internet at the university.

How often staff get connected:

Time taken on using Internet is one factor that shows staff ability to view materials on the Internet. Table 3 shows daily average hours a teaching staff member takes using the Internet.

Table 3: Daily average hours a teaching staff takes using the Internet

Time (h)	n	Percentage
0-1	26	4.66%
1-2	103	18.46%
2-3	163	29.21%
3-4	156	27.96%
5-6	68	12.19%
> 6	42	7.53%

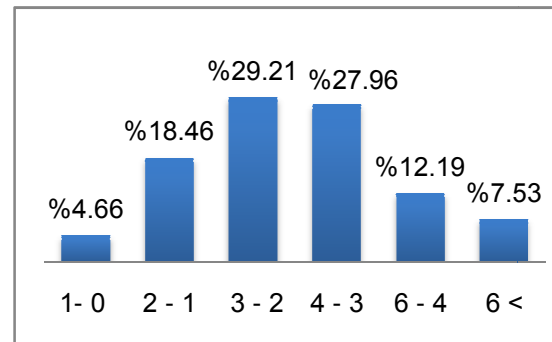


Table 3 shows that the majority of teaching staff spend between 2 to 4 hours daily accessing the Internet.

Survey Results

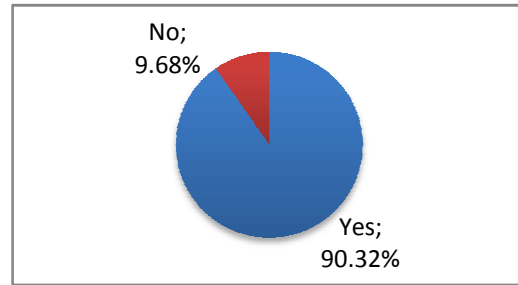
We provide results as per the survey questions below:

Research question 1: Are teaching staff using OER?

Table 4 shows that 90.32% of teaching staff are aware of OER and already using it. Only 54 participants are not using OER.

Table 4: OER awareness

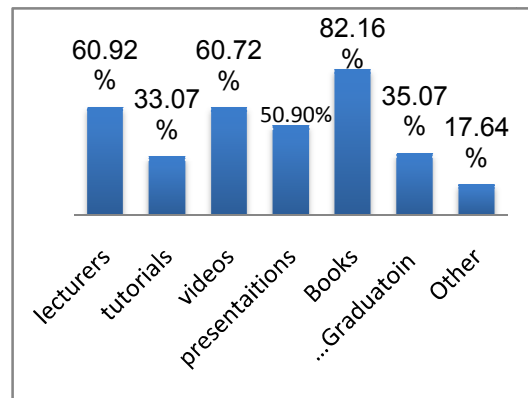
Using OER?	<i>n</i>	Percentage
Yes	504	90.32%
No	54	9.68%



Research question 2: What type of OER materials is teaching staff using?

Table 5: Type of OER used

OER Type	<i>n</i>	Percentage
Lectures	304	60.92%
Tutorials	165	33.07%
Videos	303	60.72%
Presentations	254	50.90%
Books	410	82.16%
Graduation projects	175	35.07%
Other	88	17.64%



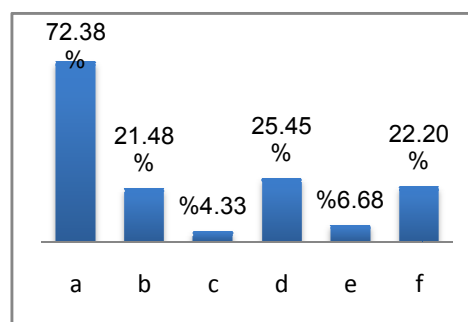
The answers of the 504 teaching staff who have answered YES to the last question are shown in Table 5. Results show that teaching staff members use books more than any other materials (82.16%). Then they equally use tutorials and videos at around (66%), followed by lectures (60.92%), presentations (50.90%) and graduation projects (11%). 17.64% of participants indicated that they used other material.

Research question 3: How do you deliver educational material such as lecture notes and homework to students in subjects that you teach?

- I pass paper copies to students or to the photocopy boot
- I upload materials to a special page for the subject
- I upload materials to the university student management system
- I upload materials to a closed group for the subject on social media
- I upload materials to an open group for the subject on social media
- Others

Table 6: How teaching staff deliver Educational Materials to students

Choice	n	Percentage
a	401	72.38%
b	119	21.48%
c	24	4.33%
d	141	25.45%
e	37	6.68%
f	123	22.20%



Answers to this question reveal that teaching staff members at the university still rely on the conventional way to deliver materials to student. However, 25.45% of them use social media groups to deliver materials to student, and 21.48% state that they upload materials to a subject-dedicated webpage. Answers reveal that only 6.68% of teaching staff members make their materials publicly available through social media and it is not clear whether or not materials uploaded to the subject

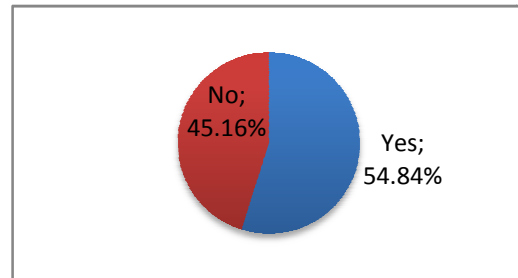
page are made public. While 22.20% of participants choose the option “Others”, most of them stated that they pass electronic copies to students either through email, or portable media such as flash memories or CDs. Some others stated that they deliver lectures using a board and ask student to copy what they write. In addition, there are few cases where lecturers stated that they use a learning management system to deliver materials to students. Several answers stated that they refer students to reference books.

Research question 4: Do you share presentations and lecture notes you prepare with other staff members at the university?

Answers to this question are shown in table 7.

Table 7: Do you share your educational resources with others?

Impact	<i>n</i>	Percentage
Yes	306	54.84%
No	252	45.16%



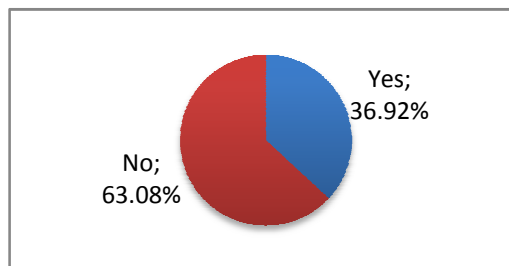
Answers to this question shows that 54.84% share education materials they prepare with others. This is a good sign that shows the willingness of teaching staff to contribute their materials to OER. On the other side, 45.16% of teaching staff are not sharing their materials with others.

On another question, participants were asked whether they use materials prepared by their peers in the same faculty or department. The question and its answers are shown below.

Research question 5: Do you use educational materials prepared by others in your faculty or department?

Table 8: Sharing Educational materials.

Impact	<i>n</i>	Percentage
Yes	206	36.92%
No	352	63.08%



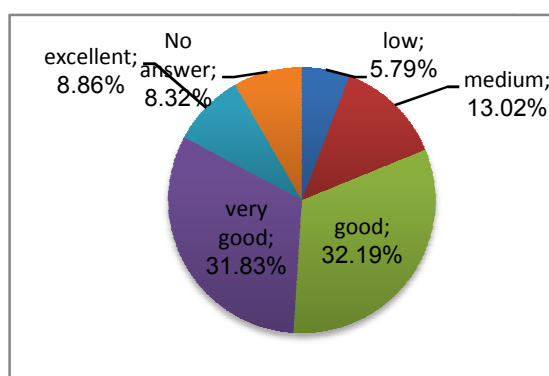
In contrary to the previous question, teaching staff members are willing to allow others to use their materials than using others' material. Answers show that 63.08% are not using others materials while the rest 36.92% are using them.

Teaching staff have been asked to rank their perspective of the importance of OER on the students overall achievements.

Research question 6: What are the effects of using OER on the overall student achievement?

Table 9: Affects of OER on students' achievements

Affects	<i>n</i>	Percentage
Low	32	5.79%
Medium	72	13.02%
Good	178	32.19%
Very good	176	31.83%
Excellent	49	8.86%
No answer	46	8.32%



Answers to this question show that the majority of teaching staff stated that OER has good, very good, or excellent influence on student

achievements. Only 5.79% stated that OER has low effects on student achievements and 8.32 could not assess its affects on students.

Research question 7: What is the language of OER materials that you usually use?

Table 10: Language of OER used by staff members.

Language	<i>n</i>	Percentage
Arabic	261	51.99%
English	402	80.08%
Others	26	5.18%

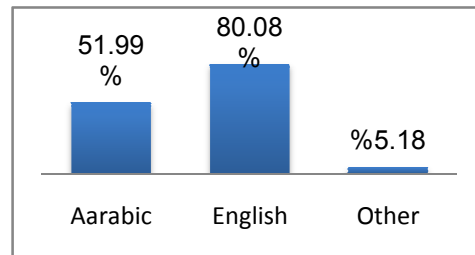


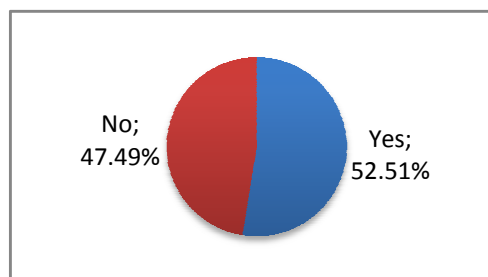
Table 10 shows the language of OER materials used by teaching staff at the University of Tripoli. By far most of teaching staff members are using English OER materials (80.08%). However, Arabic OER materials are also used by (51.99%) of them. 5.18% of our sample stated that they use other languages such: French, Spanish German, Protégées, Swahili, Czech, Italian, and Russian.

Research question 8: Do you make your research papers available freely on the Internet without violating copyrights?

Table 11 shows that 52.51% of participants are making their research available on the Internet while the rest (47.49%) are not. It is worth mentioning that the UoT does not offer staff any web pages on the university website. Having more than half of teaching staff willing to publish their papers is encouraging factor. We believe this number would increase if the university supports them with required tools and space.

Table 11: Does staff members make their ER freely available on the Internet?

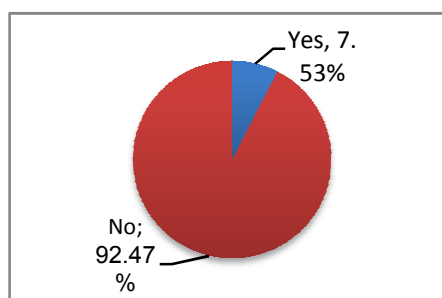
Do you make ER freely available?	n	Percentage
Yes	293	52.51%
No	265	47.49%



Research question 9: Does the university in general or the faculty you are working in offering any OER?

Table 12: Does UoT offer any OER materials?

Does staff publish any ER?	n	Percentage
Yes	42	7.53%
No	516	92.47%



The majority of teaching staff indicated that the University of Tripoli is not offering any OER (92.47%), while small portion (7.53%) stated the opposite.

The University of Tripoli has recently joined the UNISCO initiative and created an OER repository. However, the survey results show that the majority of the teaching staff members are not aware of such a repository nor they use it.

Research question 10: Does the university or the faculty you are working in offering webpages to subjects that you teach?

Table 13: UoT support for creating OER.

Does UoT offers subject webpages?	n	Percentage
Yes	84	15.05%
No	474	84.95%

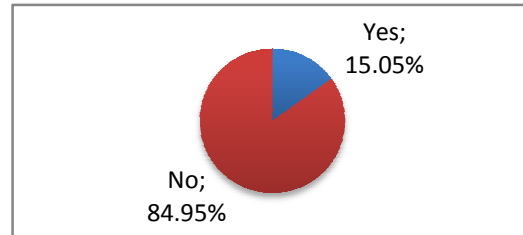


Table 13 shows that 84.95% of the participants stated that the university is not offering any specific webpages to subjects taught by teaching staff. 15.05% stated that the university or the faculty they teach in is offering a dedicated webpage to subjects.

UoT currently is not offering any subject webpages on their official website, however, some faculty has their own websites hosted outside the university domain. UoT has recently forced all faculties to move their websites under the university domain.

Research question 11: In your opinion, what factors could facilitate providing students with OER?

This question was a free and not compulsory question, 481 participants responded with their opinion on what factors that facilitate providing OER to students. Responses are summarized in the following points:

1. Offering free reliable Internet access within all the University of Tripoli campuses.
2. Creating free electronic library.
3. Offering special websites to educational materials which are freely accessible by students.
4. Providing access to international platforms such as journals and research libraries for all students and teaching staff.

5. Providing dedicated and manageable websites for teaching staff members.
6. Creating dedicated subjects' webpages under the university website.
7. Offering support to teaching staff and students.
8. Increasing the awareness of OER among students and staff members through workshops and training.
9. Offering freely dedicated places for Internet within university campuses.
10. Encouraging teaching staff to translate English OER to Arabic.
11. Providing financial support to creating OER materials.

Conclusions:

The main goal of this research paper was to measure the use of OER at the University of Tripoli and to increase the awareness and importance of the OERs within teaching staff members. A sample of 558 teaching staff member responses have been received and analyzed. The survey results show that our teaching staff members are very aware of the OER and do use them to some extent. About 90% of the teaching staff members surveyed responded very positive to using OER. They are aware of OER and would be able to contribute OER materials if proper environment is provided. More than (50%) of teaching staff members are freely share their materials with others on the Internet.

The university of Tripoli should provide more support in order to increase the use and the creation of OER. Responses show that the university is not making effort to creating any OER materials. Over 90% saying that the university is not offering any OER materials, nor offering any dedicated subject webpages. Majority of teaching staff members at the university complain of not having proper IT support on UoT campuses. They are using Internet at home (90.14%) more than university (31.54%). According to comments received, the majority of teaching staff

are asking for proper Internet connection, ability to access digital libraries, offering a proper website to host their contributions, and providing financial support to creating OER.

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