A pilot study on Open Educational Resources and experiential carried out by higher education in Libya.

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Abstract
Open Educational Resources (OER) is simple but powerful educational materials made freely and legally available on the Internet for anyone to reuse, revise, and redistribute. These materials have the potential to give people everywhere equal access to our collective knowledge and provide many more people around the world with access to quality education by making lectures, books and curricula widely available on the Internet. In this paper a brief history of OER is stated and then Creative Commons Licenses are explained and finally the steps to implement OER in Libya are outlined.

Keywords: Open Educational Resources, Open Content, OER, Creative Commons, DSPACE.

Introduction

“Open Educational Resources (OERs) are any type of 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. OERs range from textbooks to curricula, syllabi, lecture notes, assignments, tests, projects, audio, video and animation.” - UNESCO, Home Page dated 2nd October2013[1].

The currently most used definition of OER is: “Open Educational Resources are digitized materials offered freely and openly for educators, students and self-leaners to use and re-use for teaching, learning and research” [2].

History of OER

Larry Lessig and others founded in 2001 the Creative Commons and released a flexible set of licenses that were both a vast improvement on the Open Publication License’s confusing license option structure and significantly stronger legal documents[3]. One role of Creative Commons in
the history of OER is the increase in credibility and confidence their legally superior, much easier to use licenses brought to the open content community. Also in 2001 MIT announced its OpenCourseWare initiative to publish nearly every university course for free public access for noncommercial use. MIT OpenCourseWare has played many roles in the history of OER, including being an example of commitment at an institutional level, working actively to encourage similar projects[4][5]. UNESCO in 2002 held a meeting included many people who “wished to develop together a universal educational resource available for the whole of humanity.” They chose the term “open educational resource” to describe their efforts[6]. With the support of the Hewlett Foundation, UNESCO created a global OER Community wiki in 2005 to share information and work collaboratively on issues surrounding the production and use of Open Educational Resources [7]. In 2012, The world OER Congress held at UNESCO[8]. Paris on 20-22 June, the Universal Declaration of Human Rights, stats that “Everyone has the right to education”, and at the congress they end up with ten recommendations[8], finally the 2nd World OER congress held in Ljubljana, Slovenia adopted the OER action plan[8]

OER advantages and disadvantages

- Breaking the authorization barriers that formal institutions impose and they are also copyright ‘free’.
- sharing the resources specifically the faculty and the content by keeping it in public domain
- Use of alternatives to textbooks while maintaining instructional quality.
- Lowering the cost of educational materials.

Some disadvantages of OER include:

- Inconstant Quality of available OER materials.
- No common standard for review of OER accuracy and quality
- Customization necessary to match departmental and/or faculty curriculum requirements
- Technical requirements to access may vary.
- Reliance on web-based resources presents potential problems with unequal access for students who do not have broadband internet connections, this problem might be solved with 24-hour computer labs on campus.
- Unrealistic expectations from administrators as to the extra time it takes for faculty to incorporate OER into their courses. To some degree this is can be just a cost-shifting exercise where the money the students save is due to uncompensated extra time put in by faculty.
Creative Commons Licenses

Open licensing is built within the existing framework of intellectual property rights as defined by relevant international conventions and respects the authorship of the work. The most developed alternative licensing approach is that developed by Larry Lessig of Stanford University in 2001, called Creative Commons (CC)[9] where he describes the philosophy of Creative Commons as follows:

“Inspired by the free software movement, the Creative Commons believes that a large vibrant public domain of information and content is a pre-requisite to sustained creativity, and there is a need to proactively enrich this public domain by creating a positive rights discourse. It does this by creating a set of licenses to enable open content and collaboration, as well as acting as a database of open content. Creative Commons also serves to educate the public about issues of copyright, freedom of speech and expression and the public domain.” [10].

The CC approach provides user-friendly open licenses for digital materials and so avoids the automatically applied copyright restrictions. The popularity of CC licenses has grown incrementally since its launch in 2002 and by 2006 it was estimated that 45 million web pages had been licensed with a CC license. Figure 1 shows the growth of licenses to the end of 2016 [11].

The CC licenses take account of different copyright laws in different countries and also allow for different language versions. To make the licensing process as simple as possible for users the Creative Commons site makes use of a license generator that suggests the most appropriate license based on a user’s response to specific questions regarding how their work can be used [12]. In order to facilitate searching for resources licenses in a particular way, the CC license is expressed in three versions [12][13] see Figure 2:

• **Legal code**: the legal fine print that ensure the license is recognized in a court of law.

• **Commons deed(human Readable)**: this is a plain language version of the license, with supporting icons (see table 1);
• **Digital code**: a machine readable translation that allows search engines to identify work by its terms of use.

![Figure 2 Three layers of licenses](image)

All CC licenses include ‘Baseline Rights’: the rights to copy, distribute, display, perform publicly or by digital performance, and to the change the format of the material as a verbatim copy Hofman & West[14]. In addition, all CC licenses assert the author’s right over copyright and the granting of copyright freedoms and require licensees to:

- Obtain permission should they wish to use the resource in a manner that has been restricted.
- Keep the copyright notice intact on all copies of the work.
- Publish the license with the work or include a link to the license from any copies of the work.
- Not change the license terms in anyway.
- Not use technology or other means to restrict other licenses’ lawful use of the work[14] see Table 1. License Conditions

<table>
<thead>
<tr>
<th>Attribution</th>
<th>Share Alike SA</th>
<th>Non Commercial NC</th>
<th>No Derivative Works ND</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Creative Commons Attribution license allows redistribution and re-use of a licensed work on the condition that the creator is appropriately credited.</td>
<td>The Creative Commons Attribution-ShareAlike license allows redistribution and re-use of a licensed work on the conditions that the creator is appropriately credited and that any derivative work is made available under the same or a compatible license.</td>
<td>You let others copy, distribute, display, perform, and (unless you have chosen No Derivatives) modify and use your work for any purpose other than commercially unless they get your permission first.</td>
<td>You let others copy, distribute, display and perform only original copies of your work. If they want to modify your work, they must get your permission first.</td>
</tr>
</tbody>
</table>

**Table 1 License Conditions**
These licenses let others distribute, remix, tweak, and build upon work, even commercially, as long as they credit the original creation. This is the most accommodating of licenses offered. Recommended for maximum dissemination and use of licensed materials [12] see Table 2.

<table>
<thead>
<tr>
<th>ICON</th>
<th>Description</th>
<th>Acronym</th>
<th>Modification or derivative work derived from it</th>
<th>Allows Commercial use</th>
<th>The author must be mentioned</th>
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<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
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<td>BY-SA</td>
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<td>YES</td>
</tr>
<tr>
<td><img src="image3" alt="Icon" /></td>
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<td>YES</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
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<td>BY-NC-ND</td>
<td>NO</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td><img src="image5" alt="Icon" /></td>
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<td>BY-NC</td>
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<td>NO</td>
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<td>BY-ND</td>
<td>NO</td>
<td>NO</td>
<td>YES</td>
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</tbody>
</table>

Table 2 The most regularly used licenses

Figure 3 shows the percentage of different world created licenses.

![Figure 3 World created Licenses](image7)

Open Educational Resources in Libya
In 2016, Amman Jordon the Inception Meeting and Planning Workshop on OER in Libya was held to let decision makers to agree upon viable project plans for enhancing the quality of higher education in Libya through the adoption and development of OER.

The OER for Libya Project which aims to support the Libyan higher education community to enhance the quality, reach and impact of higher education by increasing the use, development and dissemination of OER by supporting advocacy, capacity-building and the creation of a Libyan Higher Education OER Community.

The main objective of the project is to provide Libyan stakeholders with the knowledge and skills necessary to sustainably develop and use OERs to support quality learning and teaching in Libyan higher education institutions.

The immediate project goals are:

- a situational analysis of the use/potential of OER in the Libyan education system, with a focus on higher education.
- Ensuring widespread awareness of OER of decision-makers at the governmental and higher education institutions, higher education teaching staff, students and other educational members in Libya
- Capacity building of higher education teaching personnel on the use/re-use and sharing of OER for their professional practice
- Development of a Libyan Community of Practice of Higher Education Teaching Personnel focusing on the use of OER for higher education in Libya.

In 2017 Ljubijana, Slovenia, The Libyan Higher Education OER Network presenting the Libyan universities, prepared OER Courses and have been presented in Ljubijana, the titles of the courses are [15]:

Basic Mathematics
Emergency Treatment
ERP
Object Oriented Programming
Environmental pollution
National culture
Renewable energy
Electronic library

In October 2017, the Libyan group met in AJDABIA to discuss the roadmap to implement Digital Repository in our universities, and they discussed the starting date to launch all the university Repository & their Polices see Table 3.
Table 3: Digital Repository Status In Libyan Universities (18/11/2017)

<table>
<thead>
<tr>
<th>#</th>
<th>University Name</th>
<th>DSPACE Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>University of Tripoli</td>
<td>Done Online in October 2017 Under Domain</td>
</tr>
<tr>
<td>2</td>
<td>Asmariya University</td>
<td>Done Online in November 2017</td>
</tr>
<tr>
<td>3</td>
<td>Libyan International Medical</td>
<td>Done Online</td>
</tr>
<tr>
<td></td>
<td>University</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>University of Sabratha</td>
<td>Done Online in November 2017</td>
</tr>
<tr>
<td>5</td>
<td>Sebha University</td>
<td>Done Online</td>
</tr>
<tr>
<td>6</td>
<td>Bani Walid University</td>
<td>Done Locally October 2017</td>
</tr>
<tr>
<td>7</td>
<td>Ajdabia University</td>
<td>Done Locally</td>
</tr>
<tr>
<td>8</td>
<td>Open University – Benghazi</td>
<td>Done Locally</td>
</tr>
<tr>
<td>9</td>
<td>Omer Elmoktar University</td>
<td>Done Locally</td>
</tr>
<tr>
<td>10</td>
<td>University of Benghazi</td>
<td>Done Locally</td>
</tr>
<tr>
<td>11</td>
<td>University of Tobroq</td>
<td>Done Locally</td>
</tr>
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<td>12</td>
<td>Almergh University</td>
<td>Done Locally</td>
</tr>
<tr>
<td>13</td>
<td>Open University – Tripoli</td>
<td>Done Locally</td>
</tr>
<tr>
<td>14</td>
<td>Zawia University</td>
<td>Done Locally</td>
</tr>
<tr>
<td>15</td>
<td>Open University – Zintan</td>
<td>Done Locally</td>
</tr>
<tr>
<td>16</td>
<td>Zintan University</td>
<td>Done Locally</td>
</tr>
</tbody>
</table>

DSPACE

DSPACE is a Repository where we can store all types of data, and it will be ready for access. DSPACE is recommended by UNESCO, it is free and completely customizable to fit the needs of any educational organization. It preserves and enables easy and open access to all types of digital content including text, images, moving images, mpegs and data sets. And with an ever-growing community of developers, committed to continuously expanding and improving the software, each DSPACE installation benefits from the next. The requirements for DSPACE production environments do require dedicated resources, and because the installation procedure is not straightforward and requires specialized knowledge. The first issue is we found this to be a major struggling point for the institutions. And the second issue is we found that most educational institutes lack the budget to fund the project, especially in the early testing phase.

To solve the first issue and make the entry requirements as easy as possible for the institutions while encouraging best practices to keep their data secure. We propose building a unified hosting environment exclusively for the educational institutes to help them getting started with DSPACE. The proposed hosting environment would focus on providing the following benefits:

- Fast automated deployment in 10 minutes.
- Secure default configuration
- Dedicated and scalable resources
- Automated backups and recovery
- Customized to use institution domain name

To solve the second issue, we are hoping that this project could be sponsored in a way that would take the financial burden off the educational institutes and thus help them to benefit from the open knowledge management offered by DSPACE.

Conclusion & Recommendation

OER movement is just started in Libya. The creation of open education materials in various disciplines by the experts from the institutions will help the teachers to access these materials at
the click of the mouse which will help them in classroom teaching. Moreover, it is more beneficial for the students as they will get the opportunity to hear the lectures from the teachers of international repute. Open educational resources which are generally made web based are interactive in nature therefore it helps the student to interact didactically with the teachers and thus clarify the doubts instantaneously. Moreover, it could be accessed from any remote area as it requires internet connectivity. The additional benefit is that one can register oneself in these open education resources portals for the different online courses (subject to availability of course) and thus get additional certificates. Another challenge is to make different stakeholders aware of the different open educational resources available to them free of cost. Last the students and teachers need to utilize it to the optimum level. Since, globalization has transform the education and its system therefore, it is indeed necessary that teachers collaborate, adapt and adopt, translate the educational resources with the external world as it is very difficult to create all kind of materials. In all, one can say success of OER movement means success for higher education.

We recommend the following steps:

- More workshops to disseminate this knowledge in our universities.
- The idea of licensing should be generalized between departments and faculties in our Universities.
- The faculties should be strongly urged to use open educational resources in their courses, and the role of quality in these materials is not forgotten.
- We propose building a unified hosting environment exclusively for the educational Universities in Libya regarding the Repository.

References

[9] Creative Commons https://creativecommons.org/author/lessig/


[12] Creative Commons (2017), [online], https://creativecommons.org/.

