

CHAPTER 1:

Open Educational Resources and Open Pedagogy in Lebanon: A Steppingstone into Openness

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Abstract

This chapter discusses the processes and outcomes of utilizing Open Educational Resources (OER) in Lebanon for addressing five challenges that represent barriers to incorporating 21st Century Competencies (21st CC) and aspects of the Sustainable Development Goals 2030 (SDGs) in the curriculum. It draws on the experience of the UNESCO-OER Chair for Access and Success housed at Notre Dame University-Louaize (NDU). The work promoting Open Pedagogy (OP) enabled OER in Lebanon a priori. The OER activities set to address Lebanon's educational problems are aligned with the Recommendation on OER promulgated by the United Nations Educational, Scientific and Cultural Organization (UNESCO) in 2019. Results show that OP enabled OER is a promise for widening access to teaching and learning as guided by quality assurance standards of OER materials and policies in a context where the notion of OER is still in its preliminary stages of implementation and diffusion.

Keywords:

OER, Open Pedagogy, Education, Policies, Lebanon

1.1 Introduction

This chapter discusses the implementation process of utilizing Open Educational Resources (OER) in Lebanon prioritized to address five challenges plaguing the educational system: (i) lack of access to quality education; (ii) textbook quality problems; (iii) lack of continuing training opportunities for schoolteachers; (iv) the

predominance of teacher-centred pedagogy; (v) and the limited use of technology in teaching and learning. These challenges represent barriers to current educational reform efforts, particularly the need to incorporate 21st Century Competencies (21st CC) and aspects of the Sustainable Development Goals 2030 (SDGs) in the curriculum, namely Goal 4 ‘Quality Education’ and 5 ‘Equality’. Against this backdrop, a critical point for consideration is to explore innovative pedagogies that would potentially tackle protracted curricular challenges in the curriculum that dates to 1997, foremost among which is cultivating critical thinking and problem-solving skills among learners.

The overwhelming emphasis of the national curriculum on content-based knowledge acquisition at the expense of engaging students in critical thinking and problem-solving activities is clearly discernible in Lebanon’s underachievement over the years in the Programme for International Student Assessment (PISA)¹ and the Trends International Mathematics and Science Study (TIMSS)² in which participating Lebanese students have sharply scored below the international mean score of these tests that are designed to measure ability, problem-solving and critical thinking skills, focusing on proficiency in reading, mathematics, science and innovative domains³. These results indicate the need to reform the educational system by capitalizing on local needs while aligning with international standards in curriculum development. As Lebanon reforms its educational system, one key area worth considering is Open Pedagogy (OP) enabled by OER, defined here as at its core, it is the application of open-source principles to teaching (Bonica et. al., 2018)

The fact that OP includes self-direction alongside using and creating OER as documented in the pertinent literature (e.g., Bonica et al., 2018) potentially allows for numerous pedagogical innovations (Jhangiani, 2017) in the curriculum, transitioning it from the current content-based nature to a competency-based one (Kazley et al., 2016), depending on how it is used. For instance, OER can allow learners to critically revise the teaching resources in which knowledge transforms from a stable asset (e.g., books) into a flexible process in which students can actively

¹ The Programme for International Student Assessment (PISA) is a survey of 15-year-old students. It is designed to assess the key knowledge and skills essential for full participation in society among students. The assessment focuses on proficiency in reading, mathematics, science, and an innovative domain (see <https://www.oecd.org/pisa/>).

² <https://www.the961.com/lebanon-intl-educational-study/>

³ See <https://timssandpirls.bc.edu/>

and critically engage (Nascimbeni & Burgos, 2019) in multiple ways including group work, problem-solving as well discussions and deliberations depending on the nature of the course and topics covered. Further, “Open Pedagogy engages students as co-creators of knowledge while making education more meaningful, participatory, and democratic” (Werth & Williams, 2021, p. 35). We hypothesize that OP enabled OER as a vehicle for fostering social justice (Bali et al., 2020) and promoting critical pedagogy in education is worth implementing as a lever for educational reform efforts aiming at redressing educational issues in Lebanon’s K-12 system.

From the onset, it should be clear that this chapter does not claim that OER is the sole panacea for redressing Lebanon’s K-12 educational challenges but is perceived as a precursor for bolstering curricular reform aiming at widening opportunities for learning on par with contemporary international trends utilizing OP enabled OER in the curriculum. A case study about OER implementation in Lebanon illustrates and exemplifies opportunities and barriers to implementing OP-enabled OER in educational contexts. In so doing, this chapter draws on the experience of the UNESCO-OER Chair for Access and Success housed at Notre Dame University-Louaize (NDU) in Lebanon and the work being done on promoting OP enabled OER in Lebanon a priori.

The various OER activities set to address Lebanon’s educational problems are aligned with the Recommendation on Open Educational Resources (OER) promulgated by the United Nations Educational, Scientific and Cultural Organization (UNESCO) in 2019⁴, accenting five objectives: (i) Building the capacity of stakeholders to create, access, re-use, adapt and redistribute OER; (ii) Developing supportive policy; (iii) Encouraging inclusive and equitable quality OER; (iv) Nurturing the creation of sustainability models for OER; and (v) Facilitating international cooperation (p. 6).

Since the concept of OER in Lebanon and the Arab world is new, a prefatory note about the advent of OER into the region would furnish background information to understand related OER initiatives and activities further. We first describe the trajectory of OER development and then discuss current initiatives in the Arab region as derived from the literature. As a caveat, data on OER in the Arab countries is scant, save a few briefings and conference proceedings. Tlili et al. (2000) confirmed

⁴ <https://en.unesco.org/news/unesco-recommendation-open-educational-resources-oer>

that no study had been conducted to cover the entire Arab region; in fact, their study that compared attitudes to OER in 22 Arab countries does not compensate for what we term here as ‘OER Information Deficit’ in the region because there is a near absence of data repositories that track and document various OER initiatives and publications accessible to the public. Comparatively speaking, research on OER in the Arab countries falls behind international trends that showed a steady increase in publication rates on OER from 2002 to 2016 (Wang, Liu, Li, & Gao, 2017). This chapter attempts, partly at least, to bridge the OER information gap in the Arab countries by sharing grounded knowledge about OER implementation in Lebanon and the region.

1.2 The Trajectory of Open Educational Resources

The concept of OER is a developmental one. It morphed from its early founding term “Learning Object”, coined by Wayne Hodgins in 1994, to “Open Content”, coined by David Wiley in 1998. Wiley provided a four-stage chronology of the OER evolution, as shown in Figure 1.1.

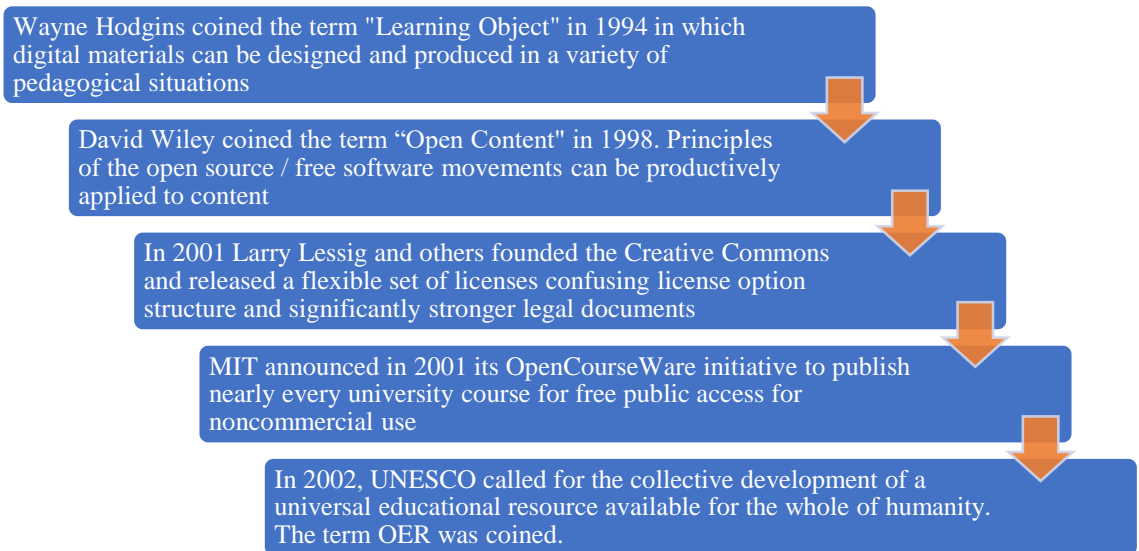


Figure 1.1: The Trajectory of Open Educational Resources⁵

Thus, the origination of OER pivoted first on digital materials, then on flexible licenses that have attempted to confront the supremacy of commercial licenses that limit access to knowledge, and thirdly providing free access to courses to the public

⁵ <https://hewlett.org/library/history-of-open-educational-resources/>

for non-commercial use. It was not until 2002 that UNESCO declared OER as a universal educational resource for the whole of humanity⁶. This declaration has set the tone for the OER movement that has seeped into education, promoting innovative styles of pedagogy and fostering social justice, foremost among which is widening access to learning resources that are free and reside in the public domain. It is worth noting that OER started recently to attract the interest of researchers, policymakers, educationalists, and governments, given its utility in enhancing pedagogy and promoting access to learning; such concepts have been at the core of governments and the United Nations agenda in education, both in formal (FE) and non-formal (NFE) sectors of education.

The commencement of OERs into the educational arena with its promise to optimize access to learning resources and promote pedagogical innovation has attracted heightened attention to its utility in teaching and learning, underlining the ability to “remix, tweak, and build upon” (About The Licenses, 2017)⁷. The term ‘build upon’ chimed with constructivism in learning, adding credence to the potential role of ‘OER-enabled pedagogy’ (Wiley & Hilton, 2018) that is positioned to shift education from content-based to competency-based approaches in teaching and learning that rest primarily in learners.

Apart from its pedagogical connotation as derived from burgeoning research on OER as an Enabled Pedagogy (Werth & Williams, 2022), such as being conducive to fostering constructivist learning and moving teaching from the “Sage on the Stage to Guy in Audience” (Bonica et al., 2018, p. 9), OER has also been perceived as a lever for nurturing social justice (e.g., Bali, Cronin, & Jhangiani, 2020). The latter has received little attention in the literature. It is worth noting that social justice in the Arab countries is a pressing issue considering rampant discrimination and the limited participation of women in political and social spheres, let alone corrosive political corruption (Khechen, 2013). In addition to discussing the implementation of OER as a vehicle for supporting OP, this chapter approaches social justice from the prism of providing equal access to quality education and promoting equity among learners.

In our view, OER coalesces with the broad principles of widening access to education in the framework of promoting social justice enunciated by the Jomtien-Thailand (1990) Education for All, Article III - Universalizing access and promoting

⁶ <https://unesdoc.unesco.org/ark:/48223/pf0000371129>

⁷ <https://creativecommons.org/licenses/>

equity.⁸ A decade later, the Dakar Framework for Action in 2000 accented that governments need to show commitment to Education for All (EFA) by widening access to education⁹. However, it underscored the challenge of implementing the consequential assignment of promoting access. Both the EFA and the Dakar Framework for Action were instrumental in enticing a renewed discourse and opening a policymaking path centred on promoting access to education in the context of social justice in line with Article 26 of the International Declaration of Human Rights 1948. However, the EFA and the subsequent Dakar Framework for Action lacked a universally standardized system and agreed-upon mechanism for implementing ensuing recommendations pertaining to access. Building on international experiences and research in the field, we envisage that OER is not only a vehicle for promoting OP that potentially migrates teaching and learning to modes of learner-centred education but also serves to foster social justice and promote lifelong learning as integral components of the Sustainable Development Goals (SDGs-2030) and 21st Century Competencies (21st CC).

In the framework of social justice and access to lifelong learning, the 2017 Ljubljana 2nd World OER Congress sets out 41 recommended actions to mainstream open-licensed resources to achieve Goal 4 on quality and lifelong learning, which enunciates: “Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all”. In tandem, the Ministerial statement of the 2nd World OER Congress endorsed the various United Nations declarations and recommendations, particularly The Incheon Declaration in 2015, which reflects the commitment of the education community to Education 2030 and the 2030 Agenda for Sustainable Development, highlights the key role of education as a main driver of development¹⁰. Notably, the 2nd World OER Congress has operationalized five axial points focusing on the following: building the capacity of users to find, re-use, create and share OER; language and cultural issues; ensuring inclusive and equitable access to quality OER; developing sustainability models; and developing supportive

8

https://bice.org/app/uploads/2014/10/unesco_world_declaration_on_education_for_all_jomtien_thailand.pdf

9

<https://sustainabledevelopment.un.org/content/documents/1681Dakar%20Framework%20for%20Action.pdf>

¹⁰ http://uis.unesco.org/sites/default/files/documents/education-2030-incheon-framework-for-action-implementation-of-sdg4-2016-en_2.pdf

policy environments.¹¹ The UNESCO 2019 set out five objectives on OER that echoed the recommendations of the 2nd World OER Congress. This chapter is pillared on these five axial objectives upon which much of the activities undertaken by the UNESCO-OER Chair for Access and Success at NDU have been conducted. These activities have not been limited in geographic scope to Lebanon but expanded to other Arab countries to build capacity and develop supportive policies, without which OER initiatives and activities would remain fragmented and un-institutionalized. Cognizant of the importance of an OER policy in Lebanon, a key project undertaken by the UNESCO-OER Chair was to develop an OER policy in collaboration with the Center for Educational Research and Development (CERD) in Lebanon in 2020. It is worth noting that the OER policy is the first of its kind in Arab countries. This policy will be further discussed in the appropriate section of this chapter.

1.3 Open Educational Resource Development in the Arab Countries

The movement of OER is only now beginning to appear in parts of the Arab region, though some headway has been made with such platforms as Edraak, the Arab World's portal to MOOC¹². There is also a MOOCs provider called Rwaq¹³. Thus, it would be unfair to say that no effort has been exerted to incorporate OER in education in the Arab region. Some piecemeal initiatives aiming at utilizing OER in teaching and learning in the vast Higher Education Institutions (HEIs) landscape have been in place since 2014. We wish to provide statistics on OER in the Arab countries; however, accurate data about the spread of OER in the Arab countries are non-existent.

Consequently, there is a distinct paucity of empirically developed OER indicators and data repositories in Arab countries. As a result, educationalists, policymakers, and curriculum developers are likely to work with arbitrary and dispersed information about OER activities in HEIs, the General Education sector, and Vocational Education and Training (VET). At the policymaking level, the lack of reliable information about the status of OER initiatives and collaborations in the

¹¹ <https://www.oercongress.org/woerc-actionplan/>

¹² see <http://www.edraak.org>

¹³ <https://www.rwaq.org/>

Arab countries often obfuscates evidence-driven policymaking processes relating to OER.

In a study covering 22 Arab countries, Arab and Chinese researchers (Tlili et al., 2000)¹⁴ described the current state of OER in the Arab region as unclear, has no explicit vision or policy to support OER adoption, except for the Kingdom of Bahrain and the Kingdom of Saudi Arabia, two affluent hydrocarbon countries which have witnessed some OER deployment activities. To exemplify, Saudi Arabia has created a popular OER repository involving a consortium of HEIs called Shms¹⁵ or Sun in Arabic, sponsored by the Saudi Research and Innovation Network, ISKME, and the Ministry of Education. It holds 81,095 different open resources that we broke down into percentages (see Figure 1.2).

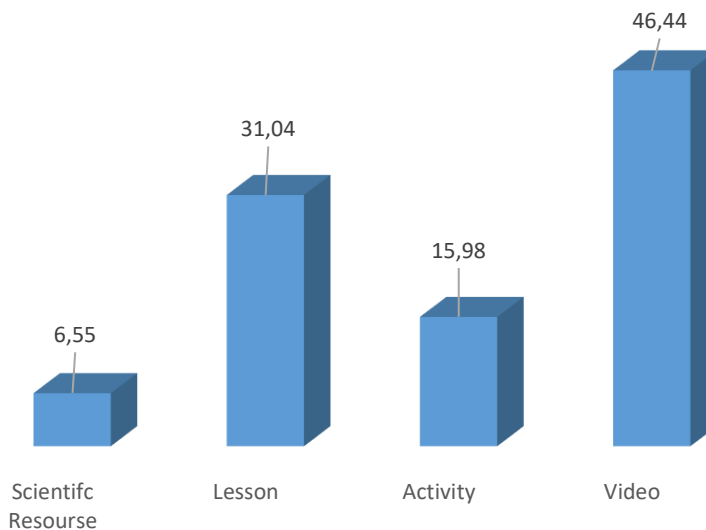


Figure 1.2: Distribution of Resources at Shms in Percentages

The Arab League Educational, Cultural and Scientific Organization (ALECSO), conceived of as the Arab world's equivalent of UNESCO, has set up a Pan-Arabic OER Community to promote OER (see Box 1.1).

¹⁴ <https://slejournal.springeropen.com/articles/10.1186/s40561-020-00120-z>

¹⁵ <https://shms.sa/>

Box 1.1: ALESCO OER¹⁶

“The creation and sharing of Open Educational Resources (OER) is in line with ALECSO’s goal to enhance the fields of education, culture, and science at regional and national levels, and to foster cooperation between Arab states thereon. The ALECSO OER hub is aimed at promoting the use, development and sharing of OERs in the Arab region. This hub contains collections of OER curated by ALECSO and partner countries”.

The ALESCO’s website shows the subject areas and material types of the open resources available to the public. We are interested in exploring the space of the social sciences in OERs because of the limited presence of the social sciences and the humanities in higher education in the Arab countries (Bamyeh, 2015), so future OER activities would give priority to these marginalized disciplines that have lost ground to applied sciences. We conducted a z-score transformation¹⁷ to show the ranking of subject areas and material types separately to provide a portfolio of the OERs by discipline. Table 1.1 shows the number of subject areas and their ranking.

Table 1.1: Ranking of OER Subject Areas

Subject Area	Number	Z-score
Applied Science	8352	1.30
Life Science	8224	1.25
Physical Science	7219	0.88
Arts & Humanities	6591	0.65
Mathematics	6560	0.64
Social Science	5297	0.17
Education	5253	0.15
English Language & Arts	3819	-0.38
History	3051	-0.66
Business & Communication	1723	-1.16
Career and Technical Education	1708	-1.16
Law	317	-1.67

¹⁶ <https://www.oercommons.org/hubs/ALECSO#about-the-alecso-oer-community>

¹⁷ The Z score reflects a standard normal deviate - the variation of across the standard normal distribution, which is a normal distribution with mean equal to zero and standard deviation equal to one. Z score: $Z = (x - \text{sample mean}) / \text{sample standard deviation}$. https://www.statsdirect.com/help/data_preparation/transform_z_scores.htm

Subject areas were above the mean in Applied Science, Life Science, and Physical Science but then dwindled to lower ranks in Arts & Humanities and Social Sciences. English Language and Arts, History, Business & Communication, Career and Technical Education, and Law were below the mean, indicating low priority in providing OERs for these areas. Table 1.2 shows the number of material resources using z-score transformation.

Table 1.2: Ranking of OER Material Types

Material Types	Number of Resources	Z-Score
Activity/Lab	12127	2.858
Lesson Plan	9558	2.031
Reading	7163	1.260
Lesson	6198	0.949
Lecture	5031	0.573
Module	4739	0.479
Textbook	3428	0.057
Assessment	3192	-0.019
Teaching/Learning Strategy	2597	-0.210
Interactive	2347	-0.291
Homework/Assignment	2335	-0.295
Full Course	2147	-0.355
Diagram/Illustration	2089	-0.374
Unit of Study	1977	-0.410
Lecture Notes	1742	-0.485
Simulation	974	-0.733
Primary Source	904	-0.755
Syllabus	796	-0.790
Case Study	685	-0.826
Student Guide	538	-0.873
Data Set	533	-0.875
Game	409	-0.915

Activity/Lab and Lesson Plan and reading scored the highest above the standard mean of zero, while assessment and teaching strategies scored far below the mean. These figures indicate that OER material resources were not equitably distributed across subjects with a low emphasis on key areas needing reform in the Arab countries, i.e., assessment and teaching/learning strategies (Abouchdid, 2017).

Briefly, while progress has trudged over the last 15 years in the Arab countries region towards achieving specific actions of SDG4, such as literacy rates and gender parity in access to formal education, the region is in dire need of feasible strategies to overcome political, social, and economic hurdles and achieve the target areas set in the SDG4 and SDG5. This can be facilitated by an overarching OER strategy for the region. In this respect, existing OER initiatives in the Arab counties are still limited, scattered, and existing ones are weakened by insufficient funding to diffuse OER as a catalyst for potentially aiding the SDGs implementation in the region. One reasonable starting point for successfully adopting OER for SDG4 and SDG5 implementation involves awareness campaigns and advocacy about the utility of OER, capacity building, and curriculum development targeting higher education institutions and schools. As far as the latter (pre-primary through secondary) education levels is concerned, there is a clear need for OER Arabic content and localisation since most OERs are produced in the non-Arabic Western language (Richter & McPherson, 2012), which is a lacuna in notions of access to resources emphasized in the discourse on OER.

1.4 Situational Analysis and the Consequential Assignment of OER

In tackling the role of OER in promoting social justice in education, this chapter investigates five areas in which OER initiatives were undertaken in Lebanon through the UNESCO Chair for Access and Success. These initiatives sought, as far as possible, to mitigate inequalities in access to education and render continuing learning opportunities to students and schoolteachers in line with the five axial recommendations set out by the 2nd World OER Congress held in Ljubljana, Slovenia, in 2017 and later replicated in UNESCO General Conference at its 40th session in November 2019. As participants in Ljubljana, Slovenia congress, we gathered information informally from participating country delegates regarding OER implementation for social justice in their own countries. Informal discussions with some participants were instrumental in shaping much of what we attempt to address in this chapter, i.e., promoting access to quality education, developing OER policies, and engaging students in critical pedagogy as optimized by OP-OER enabled pedagogy to mention but a few. At one point, the authors of this chapter compared the serious developments taking place in the United States and Europe instead of the piecemeal and personal initiative in Lebanon and those slow-paced OER

developments taking place in some Arab states. We observed a difference in OER planning and implementation: the United States and Europe involve think-tanks in OER policymaking that is research-driven instead of personal initiatives, as is the case of OER-Lebanon and regional non-governmental organizations championing OER as is the case of ALESCO. The reason for this decalage could be attributed to the fact that OER in Lebanon and the Arab region is neophyte compared to established OER experiences in Europe, the USA and that advocacy, training and funding are needed to promote OER as a vehicle for promoting OP in educational institutions through inducting schoolteachers into its dynamics. In a hierarchy of priorities, the works of OER-Lebanon and the UNESCO-OER Chair for Access and Success had to focus first on addressing pressing educational issues within available resources, both financial and human, which are meagre overall. These priorities are discussed in the section that follows as a prelude to substantiate the various interventions contrived first by OER-Lebanon and then pursued by the UNESCO-OER Chair at a later stage.

1.5 Inequitable Access to Quality Education

Like many other countries in the Arab region, Lebanon's educational system suffers from inequitable access to quality education, and there is a longstanding gap in students' access to schooling. Some statistics are helpful to contextualize the issue of access. The distribution of students across schools and regions in Lebanon largely and overwhelmingly reflects inequality of access to schooling. Poorly funded state-run schools house 36.6% of the student body compared to semi-subsidized schools partly financed by the state (11%). On the other hand, the fee-paying private schools enrol 49% of the student body in Lebanon, and schools run by the United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA) schools for Palestinian refugees accommodate 3.56% of the student body in Lebanon (CERD, 2021). In terms of Governorates, 38% are enrolled in the capital, Beirut and Mount Lebanon. In comparison, the remaining 62% are dispersed across the fringes of rural-agrarian or semi-urban governorates characterized by poor public service provision by the government, lack of equipped schools, and shortage of qualified schoolteachers.

Further, in a region known for the dominance of patriarchal behaviours and practices (Sharabi, 1988), statistics on gender equality in education raise several questions that merit further exploration. The 2005 Arab Human Development Report found gender

inequality as one of the most significant obstacles to human development in the Arab region¹⁸. Even a legal framework that is “gender-neutral” may have gender-differentiated outcomes such as employment opportunities and their ascendancy to careers that are traditionally demarcated as “masculine” (Nasser & Abouchedid, 2021). In other words, while there have been significant improvements in widening women’s access to education in Lebanon and the Arab countries, their participation in social, political, and economic spheres sharply falls behind those attained by men¹⁹. The issue of inequality represents a global challenge that agitates for immediate reforms that hinge upon a change in the mindset and culture that perpetuate patriarchy. Pillared on the praxis of emancipatory education (Freire & Ramos, 1970), OP enabled OER can be seen as a foothold upon which discourse and action towards achieving equality can evolve.

1.6 Capacity-Building of Schoolteachers

Schoolteachers in Lebanon need capacity development through training and teacher preparation programmes, which is not atypical in education systems worldwide. However, schoolteachers’ demographic and certification issues are staggering in Lebanon, raising questions about what type of training and teacher-preparation programs are suitable for remediation. Some statistics might be helpful. Half of the schoolteachers (50.2%) in private and public schools hold university degrees. In contrast, those who hold a teaching certificate (diploma, qualification, educational license, educational baccalaureate) constitute only (20.2%) of the total teaching staff in the two sectors of education (CERD Statistical Bulletin, 2020-2021).

Further, full-time schoolteachers constitute approximately (55.97%) of the total number of teachers in the public and private sectors, while 37.9% teach on contractual bases, 1.54% are volunteers, 1% are trainees, and 1.89% are hired. In 2021, the public sector housed approximately (42.5%) of all schoolteachers in Lebanon. The public and private sectors are predominated by females, constituting 80.5% of all teachers.

¹⁸ UNDP, Arab Human Development Report 2005: Towards the Rise of Women in the Arab World, 2005. http://hdr.undp.org/sites/default/files/rbas_ahdr2005_en.pdf.

¹⁹Responsible Competitiveness in the Arab World Report, 2009.

Teachers are considered young since their age ranges between 31 and 40 years, and more than half of them work in the private sector (Ibid). These figures illustrate the diversity of schoolteachers in terms of background, certification, and employment status underpin a dire need for capacity development and lifelong learning at the core of fulfilling the vision and goals set out in the national curriculum. A teacher-trainer in Training in the Ongoing Teacher Training program (OTTP) offered by CERD described the situation of teacher-training in Lebanon as follows: “So teacher education is a dilemma. The situation is much worse in the poorer areas of Lebanon”²⁰. (“Ongoing Teacher Training | CRDP Lebanon”)

Thus, teacher training remains a focal point for consideration given the declining rates of trained teachers for most levels of formal education in Lebanon. It is worth noting that existing teacher-training programs in Lebanon take the form of sporadic sandwich courses, which teachers do not always attend. On the other hand, teacher training in private schools is mandatory. The reason is that private schools enjoy a constitutional prerogative to run their own educational affairs as they see fit, according to Article 10 of the Lebanese Constitution of 1926 (Introduction, 1989).

There is a lack of data on teacher training regarding the content of the training and outcomes in the private sector. However, training in the public sector was conducted following the implementation of the 1997 curriculum to familiarize schoolteachers with the new curriculum and introduce them to the shifts that occurred in the content of the curriculum for all grades. From the anecdotal evidence that we have gathered for this chapter, we conclude that teacher training for capacity development is a key area for enhancing the teaching skills of school teachers, particularly in remote areas.

1.7 Textbooks

Another issue that requires attention is the textbook as a primary learning resource in Lebanon’s largely and overwhelmingly content-based curriculum. The textbooks for K-12 were issued by CERD successively during the years of implementation of the curriculum in 1997. It did not develop or correct its typographical or factual errors in most subjects (the errors were corrected in 2001, and Errata was sent to publishing houses to correct any book issued after that). No content development took place, despite the issuance of subsequent circulars about the assessment and updating the

²⁰ <https://www.crdp.org/magazine-details1/660/757/755>

descriptions of the official exams, which put the teacher in front of the dilemma of using the official mandatory book or resorting to an alternative textbook published by the private sector publishers. Also, there was no clear general policy for preparing and producing textbooks.

On the other hand, it is significant that the textbook's content is compatible with the educational approach, which is the social constructivism on which the curriculum was built. According to a study conducted by Nahas (2005), the following results were found:

- The books in the series differ in their interest in the cognitive and developmental dimensions.
- The books are unbalanced, neither in content nor in style.
- There is no structural effort in the content but a hierarchy in the narration of the information.
- There was control of procedural information at the expense of other conceptual fields.
- Indigenous pictures and illustrations are absent in favour of artificial ones.
- Attention to competencies is limited and replaced by procedural techniques.
- The absence of the interfering dimension in many books in the series.
- Most textbooks are void of critical thinking exercises.
- There is nothing in the book to suggest that the learner is called to make a personal contribution to acquiring knowledge.

Other studies also showed the limited position of females compared to males in textbooks and a clear stereotyping of personalities and professional groups in the interest of the leading personalities in the first place. The image of the authoritarian leader and the long-serving leader who cannot be held accountable has emerged. Emphasis was also placed on the duties of the learner-citizen and the neglect of their rights (Vision Document 2007). The need for OERs as supplemental material to make up for learning loss due to obsolete textbooks that are gendered and suffer from factual errors was an objective worth striving for.

1.8 The Use of Technology

The national curriculum suffers from limited use of technology in developing and employing students' competencies for life. The vision document prepared by the Lebanese Association for Educational Studies (Ibid) indicated that the 1997 curricula

did not include any goal about information and communication technology within its general objectives, and was satisfied with one general goal, which is the formation of citizens “aware of the importance of technology and able to use, develop and interact with it in a conscious and proficient manner.” (The 1997 Curriculum, Decree 10227). The curriculum is also limited to grades 7-12, with one class per week for technology. It turns out that technology is a marginal subject in the curriculum, despite its importance in developing skills for employment in the labor market, as it is not given weight in school assessment or in official national exams. Also, the density of content at the expense of developing the life skills that students need to invest in the labor market further separates public education from higher education and the labor market. The study of Abdel -Reda (1998) showed that there are semi-closed circles that provide pre-university studies, university studies, and the labor market, where half of university students tend towards the occupational geographic focus (working in the same study area), compared to about half expecting to work in an area other than the one in which they live. It is worth noting that the trend of professional geographic movement from other regions is limited. As for the tendency to exchange between regions, it is almost non-existent (zero-1%). In addition, it is noted that the tendency towards migration and work abroad is more important than the tendency towards professional geographic mobility between geographic areas inside Lebanon.

1.9 Styles of Pedagogy

It is common knowledge in Lebanon that the school system largely and overwhelmingly adheres to traditional education models in its various manifestations, including an emphasis on lectures and teacher-centred approaches that downplay constructivist learning approaches (Abouchdid, 2020). Private schools outperform public ones when it comes to teaching and assessment. One reason is attributed to the lack of teacher training in public schools compared to training patterns offered to teachers in private schools. Schools scattered on the fringes of traditionally marginalized regions in Lebanon are affected mainly by the lack of training and capacity building opportunities addressing teachers’ professional needs. These deprived areas have been the focus of the training activities conducted by the UNESCO-OER Chair, as will be explained in the appropriate section of this chapter.

1.10 The Open Educational Resource Experience in Lebanon: Addressing Educational Issues

OER-Lebanon and the UNESCO-OER Chair housed at NDU have addressed the above pressing issues while mapping its scope of work strategically with the UNESCO Recommendations of 2019 as guiding principles (see table 1.3).

Table 1.3: Issues in Lebanon’s Education System Mapped with OER-UNESCO Chair in line with the UNESCO 2019 Recommendations

Issues in Lebanon’s Education System	The UNESCO 2019 Recommendations				
	Building Capacity	Language & Cultural Issues	Inclusive & equitable access to quality OER	Sustainability models	Developing supportive policy environments
Inequitable Access to Quality Education	X		X		X
Schoolteachers Styles of Pedagogy	X		X		
The Textbook Teaching		X	X		X
The Use of Technology	X	X	X	X	X

OER in Lebanon started with a personal initiative led by the now UNESCO-OER Chairholder for Access and Success housed at NDU in Lebanon. This initiative is credited to the U.S. government-sponsored Alumni Exchange Program, which seeks to bring education leaders from the region of the Middle East and North Africa (MENA) to meet with their counterparts in the United States. Following the participation of the now UNESCO-OER Chairholder at NDU, a strategic direction of OER implementation has been incepted since 2014 at NDU as its main hub of activities for promoting advocacy about the utility of OER in teaching and learning as well as for textbook cost reduction, capacity building, and diffusion across educational institutions in the country. We believe that the dwindling number of students attending private higher education in 2014 in Lebanon was a harbinger of the economic collapse in the country that has taken a toll on Lebanese, migrant workers, and refugees since 2019. For instance, considering the economic dissolution in Lebanon, reducing textbook costs was an appealing idea to university students. Thus, OER functioned as a workable solution to alleviate some financial

burdens on students by providing them with access to university textbooks that are free and reside in the public domain. Another reason that created a fertile ground for endorsing OER was the rising interest in quality education since NDU has been engaged in institutional accreditation by the New England Commission of Higher Education (NECHE) since 2007. Thus, OER was promoted as a lever for ensuring student access to quality learning while reducing textbook costs. OER implementation at NDU has sought to remove the barriers to learning propped up by ever-increasing textbook costs and deal with the problem of accessibility of quality learning material in an Arab setting outside the circuit of textbook publishing and design. It also sought to substitute the “static” nature of the traditional textbook as the primary instrument of learning by open educational resources and open textbooks, the total of which constitutes a dynamic, shifting classroom textbook with which students must interact by nature of its digital format.

1.11 Institutionalizing Open Educational Resources: Towards a Policy

The institutionalization of OER in Lebanon followed a two-pronged strategy: institutional at the university level and national at the K-12 level.

1.11.1 University Level

The implementation of OER was institutionalized in 2015 through the University-wide strategic plan titled “Vision 20/20”, which calls for continuous training of faculty members and students on using OER in teaching and learning. One manifestation of such initiatives was the adoption of open textbooks that are free and openly licensed. In 2015, the university co-signed an Affiliate Agreement with Creative Commons, providing copyright licenses known as Creative Commons Licenses for the free use and sharing academic and creative resources. The start of OER at NDU enticed collaborations with the broader community, which was materialized in signing a Memorandum of Understanding (MoU) in 2017 with the official national curriculum developer in Lebanon, the Center for Educational Research and Development (CERD). The MoU stipulated that NDU would provide training to the staff, trainers, and academic personnel at CERD, so they become themselves trainers for schoolteachers in public schools. Further, as an institutional affiliate of Creative Commons, the University has led the way among other HEIs in Lebanon to promote open pedagogy and open access.

1.11.2 K-12 Level

The UNESCO-OER Chairholder for Access and Success developed an OER policy with CERD to remove educational barriers through sharing and repurposing high-quality OER, increasing access and affordability as the main foundations of OER production. The policy provided guidelines on adhering to open licensing standards applied to the Lebanese and international copyright laws and abiding by legal policies and procedures adopted by CERD. The OER policy sets out OER Quality Assurance (QA) standards and procedures for CERD employees to produce and curate high-quality OER materials. The OER policy for providing a legal framework and QA standards for ensuring the quality of OERs represents a milestone in the region since there is a paucity of policies and QA standards in Arab countries.

Briefly, OER -Lebanon has sought to promote a culture of openness in formal and non-formal sectors of education through the following:

- Promoting awareness about the use of OER in educational contexts.
- Strategizing the development of OER policies and practices.
- Encouraging open licensing of educational materials.
- Promoting capacity building in rural areas and educational settings, both formal and non-formal.
- Creating a Community of Practice around OER in Lebanon and the MENA region.
- Encouraging research in the field of OER.
- Establishing an OER website that hosts Arabic initiatives and resources.
- Developing standards for assuring the quality of OER materials.

1.12 Steps for Implementation: Preparing the Ground

The OER implementation process followed several steps to ensure a smooth process that rested on preparing faculty members, students and libraries through advocacy and capacity building as essential pillars for adopting OER and integrating it into the curriculum. The implementation process at NDU served as a pilot run in which lessons learnt would be utilized for OER implementation in the Lebanese curriculum.

1.12.1 Training Faculty Members

OER training workshops were conducted for faculty to reduce possible cultural barriers to using OER in the curriculum and engage faculty in sharing and

collaboration in teaching and research. The training workshops have fostered wider participation of faculty members in discussing the benefits of OER and exploring ways to diffuse it to other courses. Faculty members and course coordinators became “champions” crafting policies and procedures for implementing OER being part of the university’s strategic plan.

1.12.2 Training Librarians

A training workshop was offered to all staff members of the University library to support faculty members and students and help them benefit from the use of OER. A Creative Commons Licenses and OER workshop was offered on May 22, 2015. The workshop focused on the critical role that the library plays in offering the learning environment of NDU with open and free resources released under Creative Commons (CC) licenses. The training of trainers sought to enable librarians to guide faculty members in selecting the appropriate OERs and integrating them into their teaching and learning.

1.12.3 Training Students

Being part of the strategic plan to promote awareness among faculty members and students about the use of OER in education, a workshop offered to M.A. Education students was conducted in 2015. Students’ attitudes to the training workshop were positive. A student said:

I have acquired this understanding of OER through the presentation held by Dr. Baroud where he presented a clear definition of OER and their uses. This presentation was beneficial and informative. It presented clear and well stated definitions of OER, several examples, conditions of use and their benefits followed by a list of the most well-known OERs.

Another student added:

It was a big pleasure to attend this clear and valuable presentation. I hope that I will have the chance to attend another session to continue and apply what I learned because practice is essential. I am glad to be aware of the OER mission and vision because I really believe that education is for all people everywhere at any time.

One of the outcomes of the workshops addressed to students was the writing of an M.A. thesis by a student. The thesis designed a Flexbook in Physics for Grade 10 in

the official Lebanese curriculum. The Flexbook incorporated simulations to add a practical aspect to the lessons and facilitate understanding since the official physics textbook is static and lacks interactive and critical thinking activities, let alone factual errors.

1.12.4 Implementing Open Educational Resources in Teaching and Learning

One of the most significant initiatives in Lebanon was to incorporate OER into the curriculum at NDU. The implementation process started with piloting OER in an English communication course offered as a General Education Requirement (GER) in the Liberal Arts sequence to deepen student engagement and instill the value of self-directed learning as a strategy of success transferable to other HEIs in Lebanon²¹. Following the university's decision to incorporate OER in teaching and learning in 2014, 500 undergraduate students enrolled in 25 sections of the Sophomore Rhetoric course formed the first cohort to pilot the OER, reducing textbook costs and fostering a collaborative academic environment that rests on sharing, discussion, and deliberation among faculty members implementing OER²². The incorporation of OER in the Sophomore Rhetoric course was prepared for by conducting training workshops for faculty members, course coordinators and students. The workshops provided hands-on simulations to familiarize faculty members with substituting current university textbooks in the English language sequence with OER (Baroud, 2017). Following the successful implementation of OER in the English communication course, training workshops involved the Faculty of Natural and Applied Sciences (FNAS) at NDU for adopting OER in science courses, namely Mathematics, Physics, and Biology²³.

1.13 Diffusing the Notre Dame University-Louaize Open Educational Resource Implementation Experience into Schools

Diffusing OER into schools followed two tracks: working closely with CERD and reaching out to communities in marginalized areas. The aim was to set a cooperative course of action upon which OER can operate to serve schools to address the educational challenges outlined earlier.

²¹ <https://oerworldmap.org/resource/urn:uuid:cb14132c-798f-44b6-bd79-272421078766>

²² <https://creativecommons.org/2016/03/03/notre-dame-university-louaize-adopts-oer-cc-licenses/>

²³ <https://oerworldmap.org/resource/urn:uuid:cb14132c-798f-44b6-bd79-272421078766>

1.13.1 Center for Educational Research and Development

Established by virtue of Decree 2356 in 1971, the Center for Educational Research and Development (CERD) is a public institution with a legal personality that enjoys financial and administrative independence. The Minister of Education and Higher Education exercises guardianship over it²⁴. Being the official agency that develops and assess curricula in Lebanon, it was advantageous to collaborate with CERD on many fronts pertaining to diffusing OER and OP in Lebanese schools.

As implementation of the MoU co-signed between NDU and CERD for collaboration and training in OER and Creative Commons (CC), the UNESCO-OER Chairholder has conducted a series of workshops since. The overall objective of the training workshops was to build capacity and promote experience sharing among CERD's personnel in OER and CC licenses. Participants registered their satisfaction with the utility and worth of learning about OER throughout the training sessions. Trainees, who are now trainers also implementing OER in the new national curriculum as guided by the developed OER policy and QA standards, have succeeded in including OERs in the new national curriculum's draft Orientation and National Framework documents. However, it is difficult to assess how stakeholders will endorse the new curriculum framework for Lebanon due to political wrangles and disputes among political parties and confessional communities. Thus, a concurrent step for implementing OER in the curriculum is to continue offering awareness campaigns and training workshops to build the capacity of school teachers, particularly those in remote areas and marginalized settings where educational provision is weak and inadequate. An example of this is the piloting training project in a remote in Lebanon, as explained in the following section.

1.13.2 Building a Community of Practice at the Grassroots Level

A series of grassroots training workshops extending to the outskirts of Lebanon in the Bekaa Valley took place in Deir El- Ahmar was conducted as a supporting capacity-building initiative on the use of OER and OP among school teachers and school principals, complementing the training workshops conducted for CERD. Around fifty schoolteachers and principals from different public and private schools in the region participated in the training workshops. The aim was to engage education professionals with the concept of openness and familiarize them with cutting costs

²⁴ <https://www.crdp.org/en>

through OER and open textbooks, in addition to widening student access to educational materials that are free and open. The training workshops have stimulated discussions and interest in OER among participants. Moreover, the training provided to the women's organization indicated that OER gave women a voice and an opportunity to reflect on their training needs for eventually engaging students in teaching and learning in a participatory manner that fosters mutual learning away from the stagnant curriculum and static nature of the textbook.

1.14 Concluding Remarks

This chapter has demonstrated the trajectory of the implementation process and diffusion of OER in Lebanon longitudinally through the lenses of the UNESCO-OER Chair for Access and Success. The main challenge encountered in OER implementation and diffusion in educational institutions has been our dealing with a topic that falls outside the frontiers of research and national policies on OER in Lebanon and the Arab world. The information presented in this chapter attempted to de-marginalize knowledge about OER in Lebanon by sharing some experiences with the international OER community. These experiences underpin the necessity for advocacy campaigns, training, piloting, designing policies and establishing quality assurance standards for OER content as key pre-requisites for OER implementation in the curriculum, particularly as a supporting tool for OP. In addition, our experience has shown that collaboration with government bodies and grassroots organizations is a necessary condition for successful OER implementation.

In addition, the focus of OER initiatives and activities in Lebanon has shown a focus on widening access to education and training in remote areas beginning with capacity building of school teachers and school principals within the guiding principles of promoting social justice in marginalized communities within available resources and despite financial constraints.

Overall, this chapter sought to trigger a reflection on the status of OER implementation, taking Lebanon as an explanatory case study. So, our focus was not merely on the outcomes of OER implementation as measured by Key Performance Indicators (KPIs) but only on how it is working and attempting to find a footing in Lebanon's educational system, both K-12 and higher education for championing OER.

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