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Open-source electronic courses (Moocs) as a tool for digital distance learning: library science and documentation students of Khemis Miliana University as a model

Sabour Saida
Université Khemis Miliana

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Abstract

Open-source e-courses **(MOOCS)** are a new model for providing educational course materials on the global information network (World Wide Web), where the process of accessing various educational takes place according to multiple formats, whether in terms of cost or in terms of substantive or linguistic coverage.

This study aims to measure the utilization of open-source electronic courses by students of Library Science and Documentation at the University of Djilali Bounaama- Khemis Miliana. The study explores the obstacles preventing their usage and compares them with the standards related to the specialization of Information Technology, Documentation, Library Management and Documentary Institutions, and the specialization of Library Science and Documentation. The support of open-source electronic courses for Library and Information Science curriculum is assessed using descriptive analytical methodology and content analysis. We concluded that the language barrier is the main obstacle which prevents the use of electronic courses in the academic context.

Auteur correspondant : Sabour Saida, Email : s.sabour@univ-dbkm.dz

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Keywords: open-source e-courses; e-learning; distance learning; open access courses; e-courses.

المستخلص

المقررات الإلكترونية المفتوحة المصدر نمط جديد لإتاحة المواد المساقات التعليمية على شبكة المعلومات العالمية حيث تتم عملية الوصول أو الولوج إلى مختلف المواد التعليمية وفقا لصيغ متعددة سواء من حيث التكلفة أومن حيث التغطية الموضوعية أو اللغوية.

تهدف هذه الدراسة للتعرف على استعمال المقررات الإلكترونية المفتوحة المصدر لدى طلبة علم المكتبات والتوثيق بجامعة الجيلالي بونعامة -خميس مليانة-؛ مستعرضين العوائق التي تحول دون استخدامها، ومقارنتها بمقاييس تخصص تكنولوجيا المعلومات والتوثيق وإدارة المكتبات والمؤسسات الوثائقية تخصص علم المكتبات والتوثيق ومدى دعمها لها بالاعتماد على المنهج الوصفي التحليلي وتحليل المحتوى وتوصلنا إلى أن عائق اللغة أكبر سبب لا يمكن من استخدام المقررات الإلكترونية في الأوساط الجامعية.

الكلمات المفتاحية: المقررات الإلكترونية المفتوحة المصدر؛ التعليم الإلكتروني؛ التعليم عن بعد؛ المقررات ذات الإتاحة الحرة؛ المساقات الإلكترونية

Introduction

E-learning is a new paradigm that emerged with the increasing virtual presence. It's a method of transmitting and delivering information to learners using information technology, primarily the Internet. It presents educational content on online platforms to the academic community without temporal or geographical restrictions, enhancing the development of knowledge, skills, and specialization in various fields. Scientific curiosity and intellectual exploration have

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flourished in a time characterized by the transition of the educational process from classrooms to online platforms, using various communication channels and synchronous/asynchronous digital transmission technologies.

The accelerating digital development has inevitably necessitated the transition from traditional face-to-face education to online education and from constrained to open on institutional or private electronic platforms with one specialization and multi-disciplinary, offering a wide geographic scope for free without bringing together the teacher and the learner in one physical place, allowing them to choose what suits their capabilities and specialization. This ensures partial or complete interaction between learners and teachers through modern communication means and computers, fostering skills development and facilitating self-directed learning, whether specialized or interdisciplinary on e-learning platforms.

Internationally and nationally, higher education has shifted from traditional face to face education to e-learning as a new educational environment between learners and educators. To join this informational band, Algerian universities need to reconsider their educational policies by integrating information technology and modern techniques to utilize their key output: e-learning digital platforms.

In recent years, higher education in Algeria has adopted e-learning platforms like Moodle as a means to provide lessons, embodying the government's electronic policy that encompasses all sectors, including universities, higher schools, and specialized institutes. These e-learning platforms offer parallel educational content to the curriculum of various technical, human and social specializations

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taught in higher education institutions. This new educational approach allows knowledge acquisition for all students regardless of their location, running in parallel with traditional education, as a complete shift to e-learning has not been fully implemented yet.

The new trend of remote education is a technological imperative that transforms traditional classroom teaching and paper-based educational material into an electronic format by capitalizing on the Internet. Algerian university students have made using university e-learning platforms a requirement for accessing lectures of the specialization they study, while others use online sources to enhance their academic achievements, whether lectures or open access lessons in an electronic format. These open electronic courses offer freely accessible content to the student as they are not linked to electronic courses designed by the faculty of the Algerian University, but rather designed by experts and specialists at the global and Arab levels without requiring face-to-face interaction with instructors. However, they provide an educational and training content in various formats with the possibility of obtaining course completion certificates electronically. Students from advanced and developing countries can enroll in advanced academic programs offered by the platforms, whether free or for-profit, as a way to improve their academic achievement in any specialization: technical sciences or human sciences such as library science. This is due to the continuous availability of the e-learning platforms and the possibility of tracking educational courses designed by qualified and reputable professors from different specializations.

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2. Problem of the study

The study addresses the transformation of education from traditional to electronic forms, along with the emergence of open-source electronic courses in an asynchronous format as a new form of education accessible for a considerable percentage of beneficiaries, including students and professionals, for free or by paying for special training courses. This new type of education is based on registration in various courses covering multiple knowledge domains in different languages, foreign and Arabic, without specifying the academic level required to join. It only requires an internet connection and an online account. It presents an opportunity for university students to stay updated with new scientific research and enhance their knowledge in various fields, especially for foreign students whose higher education systems are also moving towards this technology-driven learning model. So:

- Do Algerian university students, specifically those majoring in Library and Information Science at the University of Khemis Miliana, utilize open electronic courses to improve their academic achievement?

2.1. Subsidiary Questions

- ✓ What are the specializations offered by the open-source electronic courses?
- ✓ Do open-source electronic courses support Library and Information Science specializations?
- ✓ Do library and documentation Science students utilize open-source electronic courses?

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2.2. Hypotheses

- ✓ Open-source electronic courses **(Moocs)** are multi-disciplinary, and they provide a range of courses that cover units related to the subjects studied by students of Library Science and Documentation at the University of Khemis Miliana.
- ✓ Open-source electronic courses **(Moocs)** do not support the Library Science and Documentation Major at Khemis Miliana University.
- ✓ Open-source electronic courses **(Moocs)** provide courses in foreign languages, which hinder their use by students of library science and documentation at Khemis Miliana University.

Second: Theoretical framework of the study

1. Terminology Clarification

Any study is based on a set of terms that serve as variables and key words for the subject matter and the focus of the main and subsidiary questions. Our study includes a set of terms that must be defined in order to clarify what will be addressed in the study and remove ambiguity. The study includes a set of terms listed from general to specific.

1.1 E-learning

E-learning is a system for delivering educational courses via the Internet, a local network, satellites, or interactive television to reach the target audience. It aims to create an interactive environment rich in computer-based applications to enable the student to access learning

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resources (educational content) anywhere and at any time, partially or comprehensively, using advanced programs stored on the computer or on the Internet... using e-mail, educational software, discussion forums and chats[1]. The main goal is to transform traditional paper-based educational courses into electronic format and make them available to students. Additionally, it involves transferring discussion and interaction spaces to the digital platform, generally transforming the traditional educational process into a digital platform using the internet.

1.2. Online platforms

They are remote learning environments based on web technology, consisting of technical or commercial frameworks that provide access to interactive or non-interactive online services that can be broadcast or provided on the line either free or subject to payment, with limited or unlimited access, through a direct link and formal [2]. They are accessible through an official and direct link. These platforms act as educational intermediaries between students and educators without necessarily requiring interaction.

1.3. Massive Open Online Courses (MOOCs)

MOOCs stands for (Massive Open Online Courses) and in French **(FLOT)**: (Formation en Ligne Ouverte à Tous) or **(CLOM):** (Cours en Ligne Ouvert et Massif). They are interactive online courses with open access available to everyone through email registration. They were initiated by major universities like Harvard and American University of Science and Technology.

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MOOCs are intensive electronic courses that allow participation in content creation through a combination of social networks and digital video broadcasting, where it becomes possible to learn, interact, and collaborate at any time and from anywhere[3].

They represent a new type of pedagogical educational format, unlike traditional lecture-based learning, where access is given to a set of courses with multiple digital educational contents[4]. In European Higher Education, MOOCs are defined as widely available educational courses open to all without financial commitments or limitations on the number of participants. They are typically designed to achieve various learning objectives in different academic fields and are delivered through an online platform that allows interactive practices, both among peers and between faculty and students, in a way that contributes to creating a learning community[5].

In summary, Massive Open Online Courses (MOOCs) are electronic educational courses with digital multimedia content accessible through email registration, and enrollment in courses. It is available for certain groups to communicate with teachers using Web 2.0 applications, from discussion and communication forums in an interactive, synchronous or asynchronous way, at any time and from anywhere.

In some literature, e-learning and distance education are used to denote the same meaning, that is, this type of education is based on providing educational materials (digital content) and making them available with the absence of interaction between the teacher and the learner. However, e-learning provides interaction and discussion,

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whether in the form of discussion forums or Chat rooms. The learner, then, can raise his concerns and questions to the teacher and exchange ideas with his peers. Meanwhile, university educational electronic platforms are usually directed to a specific category restricted to the specializations taught within the university. These specializations are designed according to the majors' programs that make up each of them. Whereas the open-source electronic courses include a group of specializations addressed to all categories, whether the academic community (students at different levels and postgraduates) or even professionals, with free or paid courses. These courses are held under the joint responsibility of institutes, universities and, sometimes, private institutions. The common denominator between both university e-learning platforms and open-source e-electronic platforms remains the access that is achieved by creating an account using a password-protected email.

2. Open-source e-courses: history

Open-source e-courses have gone through several stages in their development, and over the years they have witnessed various advancements. The first official appearance of this term (open source electronic courses) was by "Dave Cormier" in 2008 at the University of "Prince Edward Island" in Canada when he described the course presented by his colleagues "Downs and Sens". It was joined by 25 regular students from the University of "Manitoba", and later by more than 2200 students online for free. In 2012, the New York Times announced that 2012 is the year of MOOC, as it witnessed widespread use of MOOC worldwide. For example, Stanford University enrolled

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160000 students from 190 countries in 2011 in a course about artificial intelligence[6].

2.1. Advantages of open-source e-courses: This type of course has several distinct characteristics, including[7]

- ✓ Universal, not constrained by geographical or time boundaries.
- ✓ Multilingual: available in multiple languages and can be translated into others.
- ✓ Suitable for a large number of learners from various cultures.
- ✓ The intellectual responsibility for the content belongs to reputable academic institutions.
- ✓ Achieving Self-directed and Lifelong Learning.
- ✓ - Bridging the Knowledge Gap between advanced and developing communities.

Based on these characteristics, open-source e-courses can be categorized into various types depending on the geographical standard, including international and Arabic, i.e. international and Arab models, which we summarize as follows:

3. Open-source electronic courses

Universal models: They are internationally recognized platforms that offer a wide range of courses and are followed by a large academic community. Some notable examples include:

3.1. Coursera Platform:

Coursera is a well-known platform for open-source education (MOOCs). It offers thousands of online courses and training programs.

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Coursera was founded in 2012 by Professor Andrew Ng and Professor Daphne Koller from Stanford University. By August 2012, over 108,000 students from at least 196 countries registered in at least one course. Coursera is one of the most famous global platforms for online learning, offering courses in various technical and human sciences disciplines. It provides 17 online degrees (accredited certificates at different levels, including Master's and Doctorate). As of 2021 statistics, Coursera generated revenue estimated at $415.3 million and enables its users to [8]:

- ✓ Enabling anyone to register for free and choose from 20 educational programs with varying costs.
- ✓ Providing certificates to those who pass the courses in specializations, each course takes **4** to **6** weeks.
- ✓ The platform offers electronic certificates of the courses for a nominal fee that varies from one program to another.[9]
- ✓ The platform's content is based on accredited and prestigious international universities and institutes.
- ✓ Studying various courses is free of charge, but payment is required to obtain the certificate after passing the course exam.
- ✓ Most courses can be translated into Arabic for accessibility.
- ✓ Ease and simplicity of use for all subscribers, whatever their level.
- ✓ Download without the possibility of modification, re-use or sharing.
- ✓ It offers more than 25 university degrees, **5100** courses, and **40** specialization certificates.

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3.2. EdX platform

It is a non-profit educational platform and one of the world's most renowned online education platforms for Open Source Moocs. It provides free university-level lectures in various fields of science for students. It was created by the Massachusetts Institute of Technology in collaboration with Harvard University to provide educational lectures at the university level in various fields of science and to publish them worldwide in English. It was founded in May **2012.** In **2014**, about **50** high schools joined it, contributing to feed the platform with a range of interactive online educational courses. By May of the same year, the number of users and affiliates for online interactive courses exceeded 2.5 million, with over 160 member universities, non-profit organizations, and international entities [10].

Some of the platform's features include:[11]

- ✓ It includes a group of the world's best and most famous universities, such as Harvard and California, giving students the freedom to choose the field they want to learn and study on the site easily and at their convenience.
- ✓ The courses on the platform are based on pre-recorded lectures and uploaded in an organized and gradual manner that enables students to study and learn according to their schedule and their own time.
- ✓ The courses contain reading materials such as books and articles, which are considered supplementary or alternative sources during study and learning on the platform.

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- ✓ The platform provides forums for discussion with lecturers and with other students.
- ✓ It offers nearly **3000** online courses in various specializations.
- ✓ Joining is free because it's basically non-profit and aims more for the joy of learning.
- ✓ Initial certificates are offered as a simple academic part.

4-Arabic models: These are models designed under the supervision of Arab experts from Gulf countries as a model of global platforms to generalize the experience in the Arab world, including:

4.1. EDRAAK Platform

It is an Arabic-language open-source Moocs (Massive Open Online Courses) platform founded by Queen Rania's Education and Development Initiative in partnership with edX in 2013. It's an Arab electronic platform for open-source group courses.[12]

The platform receives financial and moral support from a group of Arab leaders, most notably Sheikh Mohammed bin Zayed Al Nahyan, Crown Prince of Abu Dhabi, Deputy Supreme Commander of the Armed Forces of the United Arab Emirates, and Chairman of the Executive Council of Abu Dhabi, as the first founding partner of Edraak[13].

Some of the platform's features for the academic community include:[14]

- ✓ Enrolling in courses offered by top international universities like Harvard and Massachusetts Institute of Technology.

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- ✓ Arabic-language courses are taught by the best academics in the Arab countries.
- ✓ Free various courses at all levels for all Arabic speakers.
- ✓ Obtaining electronic certificates upon course completion.
- ✓ Motivating Arab experts from all fields to enrich Arabic educational content on the Internet and share their experiences and knowledge with Arab learners by developing and offering courses through the platform.
- ✓ Discussion with peers and course instructors.
- ✓ Assessments and assignments to ensure understanding of the content.

4.2 RWAK platform

It is an online Arabic educational platform for open education founded in Saudi Arabia by Fouad Al-Farhan under the slogan "We believe that the Arab world deserves to have its own educational platform", where Arabs can engage with Arab academic and practical competencies to address their audience in their own language, without the need for translation. "RWAK is dedicated to providing free academic study materials in Arabic across various fields and specializations, delivered by distinguished academics from around the Arab world. It includes more than 550 lessons on the line.[15]

Initially, Rwak started with four courses in three specializations (Computer Science, Talent and Creativity, Islamic Sciences), but over time, it expanded to cover new fields such as Management and Business, Technology and its branches, Social Sciences, Humanities, Medicine, Literature, and Law. The selection of materials undergoes a rigorous and periodic review process[16].

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The platform provides the following:[17]

- ✓ High-quality video lectures and visual materials.
- ✓ Interactive activities with questions related to the content, providing immediate feedback on answers.
- ✓ Some courses grant students who join certificates of completion upon passing the final exam.
- ✓ Lecturer helps to answer the questions.
- ✓ Discussions and hours for virtual office meetings via Google Hangout's chat program to meet with the lecturer at a specified time communicated to all students via email.

Table 1: A comparison table among the sampled electronic platforms:

Indicators	Coursera Platform	EDX Platform	Edraak Platform	RWAK Platform
Intellectual responsibility	Higher Education Sector, University of Stransford	Higher Education Sector - University of California	Private Institution (Jordan)	Private Institution Saudi Arabia
Platform Interface language	Multilingual	Multilingual	Bilingual Arabic-English	Bilingual Arabic-English
Thematic coverage	Multidisciplinary	Multidisciplinary	Multidisciplinary	Multidisciplinary
Educational content	Video - PDF files Educational slides	Video Video Conferences	Video Video conferences	Video Video conferences

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Accessibility channels	computer Tablet devices Smart phones	computer Tablet devices Smart phones	computer Tablet devices Smart phones	Computer Tablet devices Smart phones
Evaluation system	Short Tests Quizzes Video quiz Interim and final exams	Interactive activities Questions and answers	Final exams and assignments for some courses Interactive exercises	Free certificate for course completion
Certificate	Free education without a certificate Paid-fees accredited Certificate	Free certificate for course completion Fee course certificate	Free certificate for course completion	Free and paid fees in progress

Source: Prepared by the author

2- Methods and Materials

Each theoretical aspect has a field study, which is the collection of methods and approaches through which we can gain insight into the topic of our article which is the use of open-source electronic courses by students of Library Science and Documentation at Khemis Miliana University. To address our problem and sub-questions, we used the descriptive-analytical approach, based on both quantitative and

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qualitative expressions to reach results after analyzing the data collected from the study sample (students of Library Science and Documentation at Khemis Miliana University) that we intentionally selected.

We used a questionnaire as a data collection tool, distributing 60 questionnaires to the study community due to its small size. We managed to retrieve 58 of them. This was done to investigate the opinions of the intentional study sample regarding the topic of open source electronic courses and their use by students of Library and Information Science in the undergraduate Information Technology and Documentation specialization and the first-year master's specialization in Documentary Institutions and Libraries Management.

1. Personal Data of Sample Individuals

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Specialty	Frequency	Percentage
Information Technology and Documentation	**44**	**%76**
Management of Documentary Institutions and libraries	**14**	**%24**
Total	**58**	**%100**

Table 2: Distribution of Sample Individuals by Specialization

From the above table, it is evident that **76 %** of the study sample consists of undergraduate students majoring in Library and Information Science with a specialization in Information Technology. They pursue their studies to obtain a degree for career advancement, including professionals who are already employed with the **DEUA** undergraduate degree in the framework of the BA system, which was replaced by the

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LMD system in the framework of training complementary in order to seek career growth or a change in position. This is in contrast to **24 %** of master's students. The reason is that most of these students have either frozen their academic year or completely abandoned their studies due to benefiting from the unemployment grant. Some of them have obtained a job, which prevents them from continuing their academic path, contenting themselves with an undergraduate degree, which is in high demand in job advertisements. Undergraduate students represent a higher percentage compared to master's students.

2. The concept of e-learning among students

The concept of e-learning among students majoring in Library and Information Science at Khemis Miliana University is associated with various concepts, as outlined in the following table:

The concept of Distance Education	Frequency	Percentage
Electronic Educational platforms	**44**	**64%**
Online Lessons	**20**	**29%**
Online Video lectures	**5**	**7%**
Total	**51**	**100%**

Table 3: The concept of e-learning among students

From the table, it becomes evident that **64%** of the respondents confirmed that e-learning refers to e-learning platforms, especially after the education policy in light of the **COVID-19** pandemic. Algerian universities have moved towards making educational content available online through the Moodle platform. This links e-learning to a university's electronic platform, reflecting their use of the university

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platform. They agree that the principle of e-learning is associated with a digital environment. Then, 29% of the respondents believe that e-learning consists of lessons on the internet. Some in the sample turn to educational videos on social networks and various websites to conduct their own research and listen to lectures related to the studied materials. They fully realize that the internet is the foundation for accessing digital content on e-learning platforms, and it is not possible without an internet connection. Finally, **7%** mentioned that it involves visual lectures, which is a small percentage recorded on foreign language websites (French and English). Students majoring in Library and Information Science at Khemis Miliana University associate e-learning with everything available on websites, the Moodle e-learning platform, social networks, and foreign language educational platforms. They understand that e-learning is an equation that combines the internet, websites, digital content, and learners. This explains their presence in the virtual space and the Information Technology major and their familiarity with modern technology.

3. E-learning platforms and students: Do students use e-learning platforms?

E-Learning	Frequency	Percentage
Yes	20	42%
No	28	58%
Total	48	100%

Table 4:The use of e-learning platforms.

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In the table provided, it is evident that **58 %** of the study sample does not use e-learning platforms. This percentage relies solely on what is provided within traditional classrooms by the teachers. The reasons behind this include a lack of familiarity with open-source e-learning platforms, inadequate computer literacy, and a lack of essential resources for remote learning, such as internet access and computers. Additionally, some in the study sample struggle with using these platforms due to their limited technical knowledge.

On the other hand, **42%** of the sample turns to e-learning to enhance their academic performance. These individuals prefer digital content and find enjoyment in learning through internet-based platforms, like Moodle, offered by their respective universities, to complete the assessments and download the lessons without the open educational courses. It's worth noting that there was some confusion between Moodle and open-source e-learning platforms, with Moodle being tailored to the university's specific needs while open-source platforms offer courses across various disciplines.

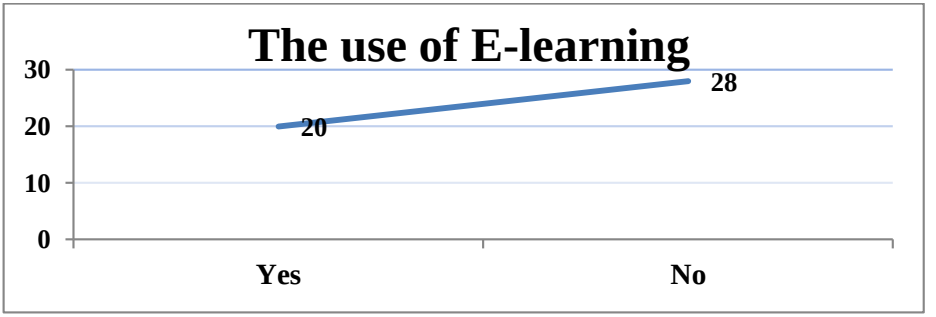


Figure 3: The use of E-Learning

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4. The electronic platforms used by students of Library Science and Documentation:

Platforms	Frequency	Percentage
Edraak platform	**25**	**%41**
EdX Platform	**00**	**%00**
Rewaq platform	**25**	**%41**
Coursera platform	**00**	**%00**
Other platforms	**10**	**%18**
Total	**60**	**%100**

Table 5: Open-source e-course platforms used by students

The table above shows that **41%** of the study sample uses the **EDRAAK** and **Rwaq** platforms, which is a significant percentage compared to their counterparts. The reasons for this can be attributed to language barriers with platforms that offer content in foreign languages (French, English, Spanish), as well as a lack of research skills when using foreign e-learning platforms. Language is a key factor for communication and understanding. Furthermore, their specific field of study may not align well with these platforms, which are more suitable for technical specializations, even though Library and Information Science is related to various other fields. However, these platforms offer courses related to the field.

Additionally, **18 %** of students use other platforms not mentioned in the table, such as the "Systematic Building Platform for Islamic Sciences", the "Ithrai" platform, and the "Noun Academic" platform, all of which are Arabic-language platforms. There's also the "Duolingo" platform for learning foreign languages.

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Finally, 00 % of the students do not use the **Coursera** and **EDX** platforms, despite their diverse digital content in various specializations. Language remains a significant hurdle, especially since their specialized courses are taught in Arabic. However, it's worth noting that some professors teach in both languages. Therefore, the **Rwaq** and **EDRAAK** platforms are the most commonly used by Library and Information Science students, as they provide educational materials in Arabic.

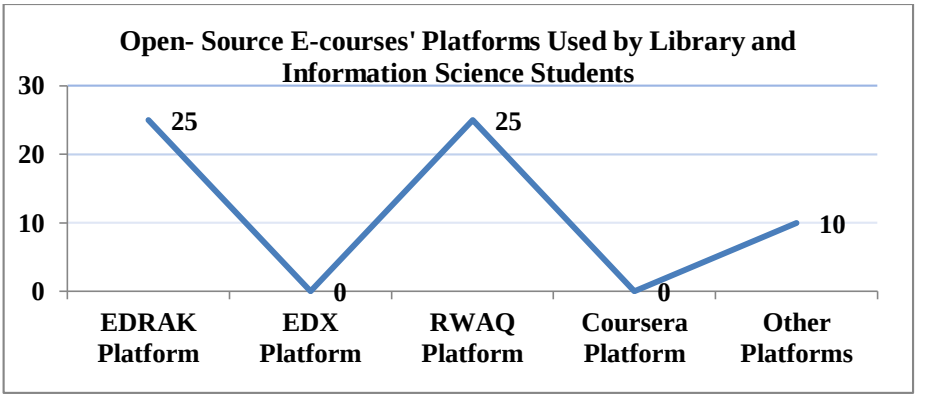


Figure 4: Open-Source E-courses' Platforms Used by Library and Information Science Students

Reasons	Frequency	percentage
Offering lessons on specialty	10	13%
Diversity of educational content	20	25%
Fun in e-learning	25	31%
Multiple access channels	25	31%
Total	70	100%

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5. Advantages of Using Open-Source E-Learning Courses:

The table above reveals that 31% of the study sample uses e-learning platforms for enjoyment, finding the appeal of e-learning different from traditional methods they've been accustomed to since elementary school. They appreciate the various access channels provided by these platforms, including computers, tablets, and smartphones, which make it easier to access course materials anywhere and anytime, especially for those with internet access on their mobile phones.

Additionally, **25 %** of the students cited the diverse educational content as a reason for using e-learning platforms. This content includes video lectures, presentations, and audio recordings, catering to the students using platforms like Riwaq and EDRAAK for language learning and occasionally for courses related to their field. Video lectures can be viewed at a later time, allowing students to revisit difficult sections. Moreover, e-learning platforms enable students to follow educational courses, complete assignments, and submit them electronically, eliminating the need for intermediaries.

Furthermore, 13 % of the students confirmed that e-learning platforms offer specialized lessons. This percentage is quite low compared to platforms tailored to Information Technology and Documentation students and master's students specializing in the management of documentary institutions and libraries, which mainly provide audio recordings and lack video lectures. However, all the open-source e-learning platforms offer Library and Information Science courses. This indicates that the study sample doesn't necessarily

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associate their use with their specific field, as seen in the percentages in the table.

In conclusion, Library and Information Science students use open-source e-learning materials due to the multiple access channels, diverse content formats, and the enjoyable nature of these platforms. The appeal lies in their design, content, and interactivity. Additionally, all these platforms can be accessed via social media links such as Facebook, YouTube, Instagram, and Twitter.

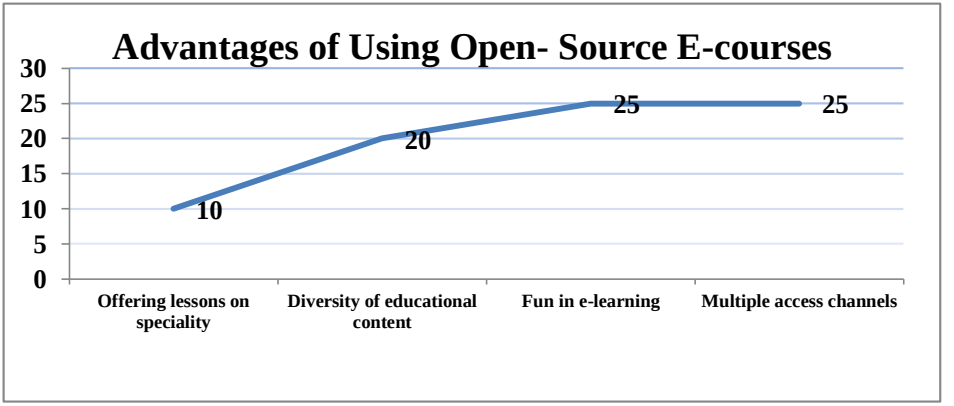


Figure 5: Advantages of Using Open-Source E-Learning Courses

6. Obstacles to using e-learning platforms

Barriers	Frequency	percentage

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Linguistic Barriers	**30**	**40%**
Technical Barriers	**20**	**27%**
Health Barriers	**00**	**00%**
Lack of Confidence	**25**	**33%**
Total	**75**	**100%**

Table 7: Barriers to using e-learning platforms

Table number 7 illustrates that 40 % of the respondents acknowledged that one of the major obstacles preventing them from using open source e-courses is the language barrier, as language is essential for communication among people and is a crucial element in the educational process. It cannot be disregarded, as it is an integral part of culture. Furthermore, most digital content is primarily available in English, which is the universal language for research and publishing, as well as in French. Therefore, language proficiency is necessary. This is what we noticed on most of the students of Library Science, and even the method of using the course. Even though the platforms provide guidelines on how to use the course, such as registration processes, available research methods, and content in foreign languages. This still explains the high percentage attributed to the language barrier.

Additionally**, 33%** of respondents expressed a lack of confidence in digital content. However, it's worth noting that the official recognition of the open-source electronic courses and their affiliation with international and Arab renowned universities and institutes, along

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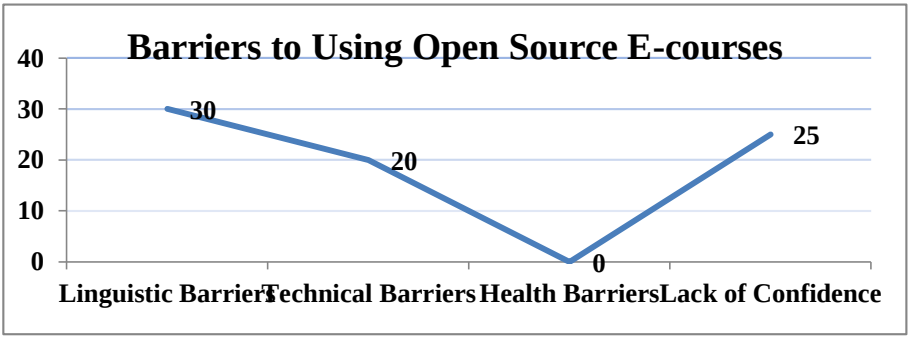
with their intellectual responsibility on the platforms, should assure the quality and reliability of the courses.

27% of respondents identified technical obstacles. These obstacles include difficulty navigating branching links and unfamiliarity with the registration process, particularly in terms of activating personal accounts on the platform using the provided links. These challenges hinder access to the platform. Moreover, limited internet access, especially in remote areas with lower bandwidth, contributes to these technical barriers. There were no reported health-related barriers, despite scientific studies confirming potential health risks associated with extended use of mobile phones and computers, particularly concerning blue light exposure and its impact on vision.

And most of them don't have time to use open-source e-learning platforms. This is attributed to the heavy workload and numerous requirements, whether in Master's or Bachelor's programs, which don't allow them to turn to educational platforms. Most students spend more than **5** hours a day on social media, and some rely on libraries and their study groups to improve their academic performance within their specialized field. This restricts their opportunities for academic improvement outside their field, which is often compulsory. This is because students do not care about traditional or digital reading. Also, when completing their research, they are satisfied with the process of copying and pasting, although open-source electronic courses are available on a set of courses that serve levels of the study sample, whether the majors taught during the first or the second semesters.

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Additionally the students are content with what their course instructors provide, as they lack confidence in the content offered online due to their unfamiliarity with these sources, despite these e-learning platforms are created and managed by experts with international and regional reputations. Moreover, students prefer using information sources available on search engines, even though they may not know the reliability of these sources. Furthermore, many students are unaware of such platforms' existence, despite promotional campaigns on social networks like Edraak.

Second year Bachelor's degree, Specialty: Information Technology and Documentation				
Modules	**EDX**	**Edraak**	**Coursera**	**RWAAK**
Bibliology: History of Books	3	0	5	00
Introduction to Archival science	0	0	2	00

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Organizing and Managing Information Systems	0	3	0	1
Research Methods and Techniques	4	0	3	4
Information Technology and Documentation	3	6	15	7
Documentary computer	1	2	2	2
Foreign language (French-English)	32	3	6	1
Maintenance and Restoration of Manuscripts	1	0	00	00
Rated Description of Unprinted Containers	1	0	00	00
Master's level: Specialty of the Management of Documentary Institutions and Libraries				
Modules :	**EDX**	**EdraaK**	**Coursera**	**Rwaak**
Scientific Management of Information Systems	28	0	141	16
Management Information Systems	5	0	1882	00

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Research Methodology	2	0	3	4
Intellectual Property and Copyright	2	0	70	00
Cultural Industry	2	0	1	00
Foreign Language	32	32	6	2
Human Resource Management	20	1	12	2
Institutional Communication	9	0	2	00
Ergonomics in Libraries	00	0	1	00
Time Management	7	2	874	00
Economics and Distribution of Information	8	0	120	00

Table 8: Comparison of modules of Information Technology and Documentation with Open-Source Courses:
Source: Prepared by the researcher based on the alignment of training offerings at the master's and bachelor's levels.

In Table 8, we can observe a comparison between the criteria for Information Technology and Documentation specialization and open-source e-courses. It is evident that the utilization of open-source e-courses by students majoring in Library and Documentation Science at the bachelor's and master's levels is linked to how well these resources align with the semester's basic, methodological, exploratory, and horizontal education unit criteria. The data in the table above was gathered by researching open courses available on electronic platforms,

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using a set of research criteria like subject matter and relevant keywords. It becomes evident that Arabic open-source e-courses do not sufficiently support the specialization criteria for several reasons:

- ✓ The modernity of the experience of open-source e-courses in the Arab countries.
- ✓ Limited Availability of Library and Information Science Course.
- ✓ Arabic open-source electronic courses are typically independent initiatives and are not affiliated with academic institutions.
- ✓ Paid courses outnumber free courses.
- ✓ Educational policies in Arab countries still prioritize traditional face-to-face learning over online education. Many students do not actively seek to enhance their academic achievements beyond what is offered by their professors.
- ✓ Arab countries exhibit differences in academic majors and specializations, making it challenging to provide standardized open courses that meet all regional requirements. This diversity is not conducive to the development of courses in Library and Information Science at the Algerian University.
- ✓ In contrast, international foreign platforms offer a wide array of courses, particularly in languages, management, human resource management, business administration, information technology, time management, and foreign languages such as English and French. Library and Information Science, being related to many of these disciplines, can benefit from these resources:

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- Global foreign open educational resources are often managed by universities, allowing for continuous content updates and the development of both paid and free courses.
- A diverse range of specializations in view of what is taught in the universities responsible for the electronic courses.
- Multiple search criteria and languages.
- A broad spectrum of free courses.
- Electronic courses keep pace with technological advancement.
- Paid electronic courses with a certificate are available at different levels (Bachelor's - Professional Master's - Academic Master's - PhD)

In conclusion, while there are certain challenges and limitations for Library and Information Science courses in Arabic open-source e-courses, it is still possible to find support for these subjects, particularly by using appropriate keywords and language settings to access the desired courses. This approach can help align with the academic standards of the University of Khemis Miliana for Library and Information Science specialization.

4. Results and Discussion

Here are the key findings of our field study:

- ✓ **58 %** of the study sample (Library and Information Science students) does not engage in e-learning.
- ✓ **64%** cited the **COVID-19** pandemic as the reason for using the Moodle e-learning platform for distance education.

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- ✓ **35%** of the study sample claimed that they lack the time to use e-learning platforms for open educational resources due to a heavy timetable and numerous assignments, despite spending over 5 hours daily on social media.
- ✓ **41%** of the study sample uses the **EDRAAK** and **Rwaq** platforms, and the reason is due to language barriers for platforms with content in foreign languages (French, English and Spanish).
- ✓ **31%** of the sample uses educational platforms for open-source courses for fun, that is, the availability of the element of attraction in e-learning and the types of educational resources, from video lectures to educational videos.
- ✓ **40%** of the study sample identified language barriers as one of the major obstacles to use open educational resources.
- ✓ Open-source educational resources are still in their early stages of use among Library and Information Science students at Khemis Miliana University due to the limited adoption of open educational practices in universities, although these resources offer multiple free options for the academic community, highlighting their potential as supportive sources for study materials.
- ✓ The lack of direct interaction with teachers does not encourage the use of open-source electronic courses, even though discussion forums and chat options are available.

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- ✓ All open educational resources are equipped with social media links, facilitating their promotion on platforms like Facebook.
- ✓ Library and Information Science students face challenges distinguishing between websites, language learning platforms, and open-source electronic courses available online.

These findings provide valuable insights into the attitudes and behaviors of Library and Information Science students regarding e-learning and open-source e-course.

Conclusion

The open-source electronic courses provide an opportunity for students to enhance their academic achievements within their chosen field of study or beyond. They allow individuals to develop their skills and obtain globally recognized certifications from reputable sources. However, realizing these benefits requires a minimum level of language proficiency and computer literacy. While open-source e-courses offer free educational opportunities for those interested, they are still in an experimental phase, both in terms of design (in Algerian universities) and usage (among students). As the famous quote by Professor Thrun Sebastian from Stanford University suggests, "We do not teach people as we wish." This highlights that free open-source e-courses have not fully achieved their intended goals, especially considering their lack of a financial incentive. In contrast, foreign countries have adopted a mix of free and paid models for higher education, with students having the flexibility to choose between them. Despite this, open-source e-courses have not achieved the desired level of success. The question remains

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whether they will succeed in Algeria, where higher education is provided free of charge.

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Auteur correspondant : Sabour Saida, Email : s.sabour@univ-dbkm.dz