



Reference Framework

E-Learning Provision and Quality Assurance in Arab Higher Education Institutions

UNESCO, 2020

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Introduction

In line with developments in international higher education, many Arab countries have made significant efforts over the past years to expand e-learning and develop the necessary legislation to ensure its quality. This comes as a continuation of previous efforts directed towards promoting distance and blended learning especially with the COVID-19 crisis which has forced governments around the world to take unprecedented measures to contain the pandemic.

The new health situation leaves little room for other options, as health and life must remain the most important priority for national governments in these delicate times.

The new measures taken as a result of the crisis have, in fact, led to the closure of many vital institutions, including higher education institutions and universities not only in the Arab region but all over the world. Widespread restrictions on travel and on students, education and administration staff, have also been adopted.

In light of this exceptional reality, higher education officials in the Arab region are diligently working to ensure the continuation of education and research for students, teachers and employees alike. To that end, they are using a variety of methods, including distance or e-learning, while, at the same time, working on maintaining communication with partners within the community.

In this context, the UNESCO Regional Bureau for Education in Beirut has initiated contact with the Ministries of Higher Education in the Arab Region in order to discuss ideas and proposals related to higher education provision during the pandemic. These revolve around relevant issues of concern to higher education institutions and university students, teachers and administration personnel in the region.

Subsequently, a regional meeting for heads of Arab Universities was held on 21/5/2020, upon the suggestion of the Ministries of Higher Education of the following countries: Mauritania, Tunisia, Libya, Yemen, the Arab Emirates, Iraq, Jordan, Palestine and Syria. The meeting aimed at highlighting successes and identifying challenges facing higher education institutions in the region. In the meeting, participants agreed that there is a need to work on a legislative framework for e-learning. Thus, experts from Arab universities were designated to work under the supervision of the UNESCO Regional Office in Beirut to develop a Regional Reference Framework for e-learning provision and quality assurance in Arab universities.

Objectives and methodology

This document aims to serve as a for higher education ministries and institutions working on e-learning. It takes into account the specificity of each Arab country and its legislative settings. It is also based on the recognition of e-learning outcomes, which should not be a substitute for, but rather a complement to, classroom education. The document looks into the advantages of e-learning in terms of responding to the expansion of university education infrastructure and to the growing demand for higher education in Arab societies.

As part of the drafting process of this Reference Framework, many several virtual meetings were held. During the first meeting, which was held on 18/6/2020, country presentations were made, detailing the experiences of some Arab countries, especially Jordan. There were also presentations about the experience of virtual universities in Tunisia and Syria.

On 29/6/2020, and during a special virtual meeting, European higher education institutions presented their experiences. The meeting resulted in the decision to focus on developing quality assurance standards for e-learning, rather than legislations, to allow recognition of this type of learning.

In its work, the Committee took into account the definitions and concepts applied in Arab countries. The Reference Framework is based on main themes detailed in the following sections: Governance and Management, Academic Curriculum, Technological Infrastructure, Education, Learning and Evaluation, Student Services, Quality Assurance Procedures, Information Security, Intellectual Property and Ethics.

Members of the Committee:

Dr. Anasse Bouhlal	Higher Education Specialist at the UNESCO Regional Office	Supervisor
Dr. Rana Ahmed Mayya	Tishreen University, Syria	Member and Rapporteur
Dr. Ahmed Othman	Ministry of Higher Education and Scientific Research, Palestine	Member
Dr. Ibrahim Mithqal Al-Jarrah	University of Jordan, Jordan	Member
Dr. Ali Hadi Attia Al-Hilali	University of Baghdad, Iraq	Member
Dr. Ammar Malouh	Public Interest Consultant, Secretary General of the Virtual University of Tunis, Tunisia	Member
Dr. Hisham Wajih Jomaa	Khalifa University of Science and Technology, UAE	Member
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Definitions

Concept	Definition
E-Learning	Provision of educational curricula through the use of various ICTS in an interactive, multi-source learning environment in all places and at all times, in a synchronous or asynchronous manner.
Regular Education (in class/ classroom education)	Provision of educational curricula through direct interaction between the teacher and the learner in the same place and at the same time in a specific learning environment.
Blended Learning	A kind of learning or education that mixes e-learning with regular (in class/classroom) learning in one setting.
Educational curriculum	A set of subjects/modules/courses leading to the obtaining of a certificate, degree or qualification.
Synchronous e-learning	Learning through educational meetings which are held between the teacher and the learner through ICTs at the same time but not at the same place.
Asynchronous e-learning	Learning which takes place at different times between the teacher and the learner by means of ICTs, without place and time constraints.
Electronic platform	An interactive education/learning environment which uses ICTs and content management systems to ensure communication, share content, exchange information and conduct activities between the different parties involved in the educational process, with the purpose of achieving quality learning outcomes.

Reference Framework

1. Governance and Management
2. Academic Curriculum
3. Technological Infrastructure
4. Education, Learning and Evaluation
5. Student Services
6. Quality Assurance Procedures
7. Information Security, Intellectual Property and Ethics

First: Governance and Management

This section aims to define the general framework for e-learning governance and management which must be put in place to achieve the best academic performance. It outlines the key components of the organizational chart, as well as the relationships and procedures needed to develop and implement e-learning policies.

Good governance and management of e-learning are key and can be achieved through the following:

- 1- **Institutional management of e-learning:**
 - In its structure, each institution must appoint “one or more” administrative units in charge of e-learning.
 - The unit/units shall handle the management, supervision, development, and continuous provision of e-learning, according to specific mechanisms detailing its/their work and responsibilities.
 - The organizational chart of the unit shall specify the functions, area of specialty as well as the technical and cognitive competencies of its personnel.
- 2- **Management of e-learning students:** The educational institution shall adopt mechanisms, procedures, or instructions including:

- Student admission and termination mechanisms.
- Students' rights and duties, as well as academic accountability and disciplinary measures.
- Approved mechanisms and procedures setting up the means and terms for the keeping, safeguarding and retrieval of students' records.

3- **Management of e-Courses:** The educational institution and its scientific departments shall adopt mechanisms to:

- Establish equivalence procedures in terms of credits or quarterly hours when a student enrolled in one program wishes to change majors at the same institution or when a student transfers from another institution.
- Set course and module hours which shall be continuously updated in line with the needs of the market and the community.
- Specify the means of reviewing and announcing course completion rates.
- Specify the distribution of courses hours between classroom learning and e-learning.
- Set clear mechanisms for practical lessons.

4- **Management of e-evaluation processes including tests and exams:** The educational institution and its scientific departments shall adopt mechanisms to manage the e-evaluation process, including:

- Using diverse tests and examinations methods.
- Verifying examination records and fulfillment of official requirements.
- Using diverse e-examination platforms, based on the available administrative and student capacities.
- Setting a mechanism for result announcement and challenging.
- Specifying the number of allowed test attempts and the terms for promotion from one stage to another.

- Establishing a system to verify student identity during exams
- Providing e-proctoring and supervision of exams.

5- **Management of e-Evaluation and Review:** The educational institution shall adopt transparent mechanisms for continuous re-evaluation and review so that to fulfill quality requirements, including:

- Using certified e-teaching and e-examination platforms.
- Evaluating teacher and administration staff performance, adopting e-learning indicators and using learning indicators and results in the evaluation process.
- Building the e-infrastructure needed.
- Adopting scientific grounds and systems for examinations.
- Allowing student participation in the evaluation of the e-learning process.
- Adopting programs and courses aimed at developing the institution and its educational mechanisms.

Second: Academic Program

This section aims at setting licensure, accreditation and quality assurance criteria for e-learning programs. This shall be in accordance with the legislation adopted by the licensure authorities. It shall also be in line with the criteria set by accreditation and quality assurance bodies so as to ensure that the program has the same academic value as other in-class programs, producing highly qualified graduates in various fields. This can be achieved by:

1. Making sure that e-learning qualifications are equivalent to those of in class/classroom programs.
2. Aligning program content and components with learning objectives on the one hand, and with e-teaching strategies, science courses content, as well as evaluation means and standards, on the other hand.
3. Training course teachers in digital pedagogics and content design.

4. Informing students about the necessary technological specifications and skills need for the course before registration.
5. Managing all services provided within the state of the institution issuing the university degree and subjecting them to the relevant laws. Making sure that programs provided from outside the country comply with the laws and requirements of the state of the institution issuing the university degree.
6. Determining and raising the program capacity as per the available framework and evaluation capacities and in accordance with the laws and measures in force at the university.
7. Adopting education modeling in the program and delivering the program in a normative manner that ensures a culture of diversity, coexistence and human rights, in line with relevant international standards.
8. At the beginning of each academic year, determining the percentage of e-learning and face-to-face sessions within blended courses or programs as per the curriculum requirements and available possibilities.

III. Technological infrastructure

E-learning requires a reliable educational structure and a technological infrastructure with appropriate specifications, a high-tech digital system, and electronic learning resources to ensure quality delivery. Below are some points that must be achieved both technically and technologically to guarantee the success of e-learning:

1. Providing reliable e-learning systems that would allow the downloading of educational materials, and connecting users so that they are able to access services easily and clearly.
2. Providing platforms for synchronous and interactive communication between the different parties involved in the educational process.
3. Establishing special departments within the institution in charge of providing technical support and training on the use of these systems and platforms for all users.

4. Providing software and technological tools to conduct e-course design as well human resources to provide training and technical support.
5. Maintaining backup copies of all data available on these systems and platforms, to be used when needed. These backups must be kept for a sufficient period of time so as to ensure quality and prevent the misuse of educational management.
6. Ensuring linkage between the e-learning system and other systems in the institution, such as the registration and financial systems.
7. Using all new devices, educational toolkits and materials, as well as their operating theories, design and production means, to support the educational system, or any of its components, with the aim of raising the efficiency of educational systems and achieving quality standards.
8. Providing rooms and laboratories equipped with the latest e-learning technologies and linking them to the necessary communication and information networks.

Fourth: Education, Learning and Evaluation

This section aims to ensure quality program design and learning outcomes evaluation by establishing a general framework for the design of e-learning programs and courses as well as for learning outcomes evaluation and interaction between different parties involved in the learning process.

a. Program and Course Design

This sub-section aims to identify the indicators needed to build quality teaching content which takes into account all academic and technical aspects and ensures the best learning outcomes. This can be achieved through the following:

1. Providing course teachers with training programs, offered by the education institution, in digital pedagogics, content design and evaluation processes.
2. Aligning e-learning programs with the vision and mission of the institution.

3. Providing a detailed description of each program specifying the program's objectives, learning outcomes and study plan as well as the admission and graduation requirements.
4. Providing a detailed description of each course including objectives and learning outcomes, evaluation methods, activities, duration, and language used in the learning process. All this information should be made available to students before they register in the course.
5. Ensuring adequacy of teaching material, activities and evaluation methods so as to achieve the desired learning outcomes.
6. Establishing clear teacher-student communication and discussion rules and ensuring they are communicated to the students.
7. Providing means and media to support students' interaction with the course content.
8. Designing teaching material according to a clear separation of subjects so as to facilitate individual learning, and designing a standard model for each part of the course including: learning outcomes, content introduction, educational activities introduction, teaching content, short tests and tasks, practical examples, discussion panels, and regular evaluation with specific exam dates and project delivery deadline, etc.
9. Ensuring that the course design enhances teacher-student interaction, student-content and student-student interaction.

b. Learning Outcomes Evaluation

This sub-section aims to identify the indicators needed to assess learning outcomes so as to ensure the sound evaluation of student level and performance in an appropriate academic environment guarantying the transparency of the evaluation process. To that end, the following is required:

1. Ensuring justice and transparency of student evaluation.
2. Linking the evaluation process with the learning outcomes during and at the end of the course

3. Providing varied assessment tools allowing to measure the extent to which students achieve their intended learning outcomes.
4. Distributing the scores assigned to each evaluation tool in a balanced way so as to reflect the targeted learning outcomes to be measured.
5. Ensuring that both formative and summative evaluation tools are adequately aligned with the learning outcomes and content, as well as with the learning mechanism and technology used.
6. Providing a general framework which organizes student learning evaluation procedures in terms of the quality of the used tools, their implementation procedures and timeframe.
7. Establishing a publication mechanism for exam results and student evaluation.
8. Establishing a control and verification mechanism to look into students' grievances and challenges of exam and evaluation results.
9. Establishing a mechanism provided with tools to detect copying, plagiarism and unreferenced use of sources.

Fifth: Student Services

Students are at the center of the educational process. This section aims to ensure that they are provided with basic services, both academic and administrative. This includes a reliable educational structure equipped with a high-tech digital system, modern electronic learning resources, and good and diverse educational media allowing easy and fast access to information. These elements should be present to facilitate communication with students, and provide them with educational efficient and quality services wherever they are. This will also help fulfill the program's mission and goals of preparing and developing students, as well as building their capacities, knowledge, production, creativity and cognitive and educational development. Among the most important services which must be available to achieve quality assurance standards are the following:

1. Providing a technical manual explaining how to use the system, and how to solve technical problems.

2. Providing a portal ensuring interface with students, equipped with high quality and efficient server and connection.
3. Providing students with special needs with appropriate educational tools.
4. Providing learning materials electronically, in digital form, so that they can be accessed anytime and anywhere, and designing interactive content with high quality and precision.
5. Establishing an electronic library.
6. Providing academic and professional counseling services.
7. Training students and equipping them with the skills they need to use modern communication media.
8. Linking the educational site to other educational sites to expand the communication circle of students and ensure more interaction.
9. Providing links through which students can access scientific websites, libraries and electronic journals.
10. Linking all faculty members' websites or blogs to the institution's website to allow student-teacher communication regarding the course content or academic guidance.
11. Providing dialogue forums to ensure communication, exchange of ideas and critical dialogues between students.
12. Providing a link on which students can post their ideas, innovations, work and opinions about the system and their suggestions about its development.

Sixth: Quality Assurance Measures

This section aims to ensure that the program achieves its desired learning goals and outcomes through approved monitoring models, mechanisms and measures. These measures should be designed to allow monitoring the progress in achieving outcomes during the learning process, as well the performance of students and the satisfaction of all parties with the learning process. They should also allow all parties to express their opinions about how to develop the learning process.

➤ **First: At an institutional level**

1. Institutions must establish and publish specific measures based on approved quality assurance models which should be part of their strategic management. Institutional e-learning policies may also include quality assurance components, including institutional support; course development; teaching and learning; course structure; student support; faculty members support through mandatory e-learning training for new staff, technological infrastructure, student and degree assessment (through learner authentication, verification of work authoring, exams and security); and electronic security measures.
2. Institutions should have a written electronic security policy explaining the use of student data (privacy, security, consent, etc.), and specifying measures against fraud, including disciplinary measures sanctioning students and staff involved in fraudulent behavior.
3. The development and implementation of e-evaluation should include preventive measures to ensure learner authentication and work authoring.
4. Guidelines and codes of conduct must be established to encourage appropriate online student behavior. Institutions must also help students understand plagiarism issues, providing them with training on paraphrasing, using citations and references from online sources.
5. The institution must have a policy and procedures in place to recognize prior learning. Institutions offering courses internationally are advised to familiarize themselves with national policies and legislations regarding the recognition of prior qualifications acquired by students abroad.

➤ **Second: content, education, learning and evaluation**

1. Specific and approved mechanisms and models with course and program evaluation procedures must be established, mentioning the areas and frequency of periodic evaluation (quarterly, annual). This must include evaluation of content, teaching methods, services and technology relevance.

Moreover, evaluation methods must be based on performance indicators to monitor and develop programs.

2. Students' exam and activity performance should be assessed and monitored so as to measure the extent to which learning outcomes and program objectives are achieved.
3. Information and data on student satisfaction about program implementation, teaching process, content and teacher performance must be provided.
4. Evaluation and feedback reports from all educational parties must be established, identifying observations and needed adjustments, and highlighting the program developments introduced based on the results of previous evaluations.
5. Institutions must be subject to periodic external quality assurance audits in line with global standards. These external audits must examine the effectiveness of internal quality assurance processes.
6. Institutions must adopt a specific program design and approval strategy and processes. The qualifications resulting from the program must also be specified and should make reference to the standards stipulated in the National Qualification Framework for higher education.
7. Teaching methodologies and learning activities must be selected with the aim of achieving learning outcomes. E-assessment methods should fit that purpose, allowing students to demonstrate the extent to which targeted learning outcomes have been achieved.

➤ **Third: regarding students and learning outcomes**

Quality Assurance Procedures (Students and Learning Outcomes)

- Student needs must be taken into account when designing learning models and curricula.
- Prospective students should be informed of the program requirements in terms of equipment, e-learning and digital skills, prior knowledge, core courses and attendance.
- Students must be briefed about the e-learning program expected workload and pedagogical model.

- Students should be clearly informed about e-assessment modalities.
- Students should be informed about the measures taken in cases of plagiarism.
- Students should receive training on paraphrasing, citation and using both printed or internet references.
- Students should receive instructions/training on the use of e-learning resources (VLE, e-library, etc.).
- Support hours should be provided in a transparent way as per student needs; for example, taking into consideration peak hours (evenings, weekends, holidays, etc.).
- The institution should publish information on completion rates, success rates and dropout rates.

➤ **Fourth: Regarding teaching staff**

This section aims to ensure that faculty members involved in e-learning programs have the needed expertise **and techniques required to ensure quality education, and are provided with continuous training and development as well as with the needed technical support to that end. This requires the following:**

1. Establishing policies and controls to organize the working methods and activities required from faculty members during teaching.
2. Establishing policies to provide faculty members with the needed technical support.
3. Setting clear requirements regarding the experience that faculty members must have in line with e-learning frameworks and establishing a clear and accurate list of skills, experiences and conditions to be met by faculty members involved in e-learning programs.
4. Establishing a clear and fair selection mechanism of faculty members based on their skills and experience in e-learning and e-assessment.
5. Providing new faculty members with special training programs.

6. Developing plans and strategies to build the skills of faculty members by allowing them to access new programs, techniques and systems and use them to improve the educational process.
7. Institutions must ensure that teachers have the right competencies. They must also apply fair and transparent recruitment processes and work on developing the skills of staff and teachers.

Seventh: Information Security, confidentiality, Intellectual Property and Ethics

Data privacy and confidentiality are important issues in any electronic environment. New technological developments require the adoption of codes of ethics guarantying the rights of individuals and institutions, especially in the field of e-learning. This is possible through the following:

1. Providing a secure environment on the various platforms to safeguard user rights and maintain data and information privacy.
2. Safeguarding the right to confidentiality and security of information.
3. Providing quality and accurate information: The use of e-learning requires the provision of high quality and accurate information, to reach quality learning outcomes.
4. Protecting intellectual property rights through legislations safeguarding the rights of producers of software, educational materials, etc., so that to strike a balance between the interests of designers, providers and users.
5. Maintaining the rights of innovators, authors and producers of various media and means.
6. Safeguarding the professional and ethical dimensions and rights of intellectual creativity.
7. Establishing electronic security measures (password protection, encryption, backup systems, etc.) to ensure the integrity and validity of information.
8. Adhering to the ethics of Internet usage.

9. Avoiding academic fraud or plagiarism.

10. Avoiding harming the reputation and data of others

National, regional and international participatory action

- Based on the recommendations and outputs of the e-learning team of experts on Arab participatory action, there is a possibility to develop joint educational programs with accredited e-courses and modules, which can benefit both researchers and students.
- We also encourage resorting to leading regional and international educational institutions with previous experience in e-learning to organize technical, teaching and administrative training courses in order to allow the good planning and implementation of e-learning programs.
- We also recommend developing cooperation and partnership agreements and exchanging expertise nationally, regionally and internationally, focusing on e-learning both at a pedagogical and a technological level and in what regards digital resources.
- Moreover, co-accreditation/ qualification and co-diplomation agreements between universities must be promoted at regional and international levels so as to guarantee that trainings and university degrees focus on promising disciplines with high employments rates and are aligned with international standards.
- Finally, the office emphasizes that Arab participatory action can open the door for a new phase of cooperation in the field of education development and the use of modern technology and new methods to enhance the quality of education in the Arab world.

General Provisions

1. Licensing and accreditation of e-learning educational programs shall be made in line with the instructions,

- procedures and requirements issued by the competent authority in the State of the requesting institution.
2. Higher education institutions providing regular education may offer e-learning or blended programs, in accordance with the quality standards set out in this document, and the conditions and procedures issued by the competent authority in the State of the educational institution.
 3. E-learning shall include interactive virtual reality applications to help build practical, application-based courses such as medical and engineering courses that are hard to teach through e-learning.

Recommendations

In what follows, the recommendations of the Committee:

1. To update and adapt national legislations and laws related to higher education to keep abreast of the electronic operations needed in digital environments and to allow mutual national and regional recognition of e-learning programs certificates and degrees in line with the Reference Framework.
2. To direct efforts towards raising awareness about the concept of e-learning, its importance and benefits, and to spread the culture of quality, computer science and digitization within higher education institutions in the Arab world.
3. To take measures aimed at accelerating the adoption of e-learning programs in higher education institutions, due to the scientific and economic advantages they offer.
4. To apply quality assurance and control standards in university e-learning, and to form work teams in Arab faculties so as to study these standards and the conditions for their application, and develop them further especially in light of the growing competition in the application of this type of learning at a regional and an international level.
5. To exchange experiences among Arab countries regarding e-learning, identify challenges and disadvantages and develop plans to deal with and overcome these challenges. Moreover,

- to exchange academic experiences to identify the latest global systems and apply them on the ground.
6. For ministries of higher education in the Arab world, to offer training to faculty members and their assistants who are tasked with developing curricula, as well as to administrators and technicians in universities providing e-learning programs. Training should allow personnel to deal with e-learning means and keep abreast of the latest technological systems designed to ensure student-teacher interaction.
 7. To establish the executive foundations and instructions related to the management of e-learning process in blended courses and programs.
 8. To commission quality assurance centers in order to provide assistance in planning, reviewing and evaluating learning outcomes and continuously improving performance.
 9. Using leading e-learning institutions to organize technical, teaching and administrative training courses in order to plan and implement e-learning programs in the institution.
 10. To take into account the circumstances prevailing in some Arab universities such as large numbers of students and poor application of education quality standards, and solve ensuing problems.

Arab and European Experiences

The Jordanian Experience:

- Instructions and standards of accreditation and quality of programs (online learning)

Refer to the Jordanian Ministry of Higher Education

- The foundations of blended learning at the University of Jordan

<http://units.ju.edu.jo/ar/LegalAffairs/Lists/Regulations/DispForm.aspx?ID=276&ContentTypeId=0x0100C7850F392E786A439F935E088708707E>

The UAE Experience

E-learning standards for licensure and accreditation, Commission for Academic Accreditation (CAA), UAE,

<https://www.caa.ae/caa/images/elearningStandards.pdf>

The Syrian Experience

- Bylaws of the Syrian Virtual University

<https://svuonline.org/ar/content/>

- Quality Assurance Procedure at the Syrian Virtual University

<https://svuonline.org/ar/quality/faq>

- Studies on Virtual Education

<https://pedia.svuonline.org/course/view.php?id=6>

The Yemeni Experience:

- Distance Learning, The faculty of Social and Applied Sciences

<http://www.aden-univ.net/stud.aspx?>

- College of Social and Applied Sciences:

<https://fsas-adenuniv.net/>

The Tunisian experience:

Website of the Virtual University of Tunis

<https://www.uvt.rnu.tn/>

Governmental Order No. 430 of 2019 dated May 6, 2019 concerning the the functions of the Virtual University of Tunis, its administrative and financial management and operating rules.

<https://www.uvt.rnu.tn/documents/doc-ar/2019-430.pdf>

The Palestinian Experience

Ministry of Higher Education and Scientific Research, Palestine

<http://www.mohe.pna.ps/>

The Iraqi Experience

Ibn Sina E-Learning Center <http://avic.uobaghdad.edu.iq/>

The European Experience

Considerations for quality assurance of e-learning provision, European Association for Quality Assurance in Higher Education AISBL 2018, Brussels. ENQA AISBL.

<http://www.enqa.eu/index.php/publications/papers-reports/occasional-papers>