



Enhancing Quality of Technology-Enhanced Learning at Jordanian Universities, EQTel

Recommendations for TEL Quality Assurance Framework

Introduction

Any recommendation for the implementation of a quality assurance system to deal with e-learning programs and other e-learning activities delivered by the Jordanian universities should be consistent with developmental plans for e-learning in Jordan higher education.

In that respect, a national or an institutional policy proposing a rapid growth of e-learning in terms of number of programs /courses and/or students enrolled will require a certain approach in quality assurance that can or not be coincident when having a different set of expectations.

At the moment, the European scheme for quality assurance in higher education is considered among the most advanced approaches in the field. This scheme is particularly interesting for two reasons: its adaptability to different national realities and its double focus for accountability and improvement. This double focus is materialised, for example, in the structure of the document on European standards and guidelines for quality assurance in higher education (ESG).

The intention of this report is not to prescribe the use of the ESG for Jordanian universities but to use the ESG as an example on how a Jordanian QA system for e-learning could be structured to facilitate accountability and enhancement by putting in place standards and guidelines.

A second consideration when designing a Jordanian QA system for e-learning in higher education is the current and future distribution of responsibilities in the sector.

- What is the role of the Ministry in charge of higher education in the regulation of the quality of e-learning programs and other e-learning activities?
- How universities distribute the responsibility of quality assurance within their decision-making structure?
- And what are the challenges and expectations at the current stage?

In that respect, and for the case of e-learning, a first recommendation is to make a distinction between:

- Programs referred to the national qualifications framework for higher education,
- Other e-learning activities not strictly linked with this national framework.

This distinction is supposed to facilitate flexible approaches according to the aims and goals of each e-learning activity.

If the following condition is assured *“any educational program referred to the national qualifications framework is included within a national/institutional system of internal and external QA”* the following recommendations suggest:

- To consider how e-learning requirements can be incorporated in existing QA systems for programs referred to the national qualifications framework,
- To integrate other e-learning activities whether they are considered as complements of existing programs or as independent components under the umbrella of a wider QA system,
- To look for the best “QA umbrella”, in terms of cost-benefit, when having other e-learning activities running as independent components.

A final introductory recommendation is referred to the question of sustainable QA systems. This sustainability is conditioned by different elements, but in many cases it seems important to know what,



in any e-learning activity, is considered as more or less stable (e.g. aims) and what is subject to permanent adaptations and changes (e.g. technology used in e-learning).

Accreditation and quality assurance in higher education is considered as one of the pillars in the development of education. It is closely connected to the components of the educational process (students, teaching staff, programs, teaching methods, labs computers, etc.). It is important especially in this era as our world is witnessing doors opened to various channels of knowledge in the time of globalization that affects our lives. The changing structure and delivery of higher education encompasses different types of educational institutions whether they are traditional or open (distance and open learning). These new realities and the growing demand for increased accountability and transparency to government, consumers and the general public require new solutions relating to the performance of quality assurance (QA). Quality assurance aims at guaranteeing the improvement of standards in higher education institutions (HEI). It enables HEI to get the necessary input, refine the process and raise the standards of output in order to meet the goals set and the needs of all stakeholders (students, employers and financiers). On the other hand, accreditation is considered the cornerstone to achieving quality assurance and it has become almost universal. Stakeholders have a range of expectations about quality outcomes in higher education. The accreditation process, while responding to institutional and programmatic interests can play a major role by changing accreditation standards and placing a strong emphasis on performance outcomes, especially student learning outcomes.

Because quality assurance and accreditation in the domain of higher education and scientific research are a priority for the Arab academic institutions in general and for Jordan in particular, it is indispensable for an academic institution to undergo an overall evaluation, which should be based on a number of quality criteria to assess the institution's commitment to them. In order for this to be appropriately done, Jordan Higher Education Accreditation Commission (HEAC) was established in 2007, in order to raise the competency level of higher education institutions in Jordan. HEAC has set a series of criteria and requirements that all institutions (Public and Private) must comply with in order to obtain full or partial accreditation for their programs.

Recent quality assurance (QA) bylaws for higher education have placed particular emphasizes on the creation of an internal quality assurance process in each university with appropriate infrastructure to oversee standards, implement proper guidelines and manage procedures within each institution. Accordingly, a new model for internal QA management to guide universities through the process of identifying priorities, determining principles, and implementing procedures across the different context of QA and stakeholders is proposed. The model is based on comparing current QA policies and practices of Jordanian universities with European experience and then sharing experiences in terms of variation and extent of applicability. The management model naturally assumes support by an infrastructure in the form of a bureau with qualified academic and administrative staff in order to ensure its successful implementation. In addition, the engagement and involvement of all stakeholders in the higher education institutions including top management, faculty members, students, administrative staff and local community, is an essential element to successfully design, apply and implement the proposed model.

The Higher Education Accreditation Commission (HEAC) was established in 2007 on the basis of the law issued in March 2007. This Commission replaced the Accreditation Council, which lasted from 1999 to 2007. The Commission is autonomous, from the financial and administrative points of view. The 2007 Accreditation Commission Law was amended in 2009 to make the Commission report to the Prime Minister instead of the Minister of Higher Education. The Commission aims at enhancing the



quality of higher education, provides quality control and encourages Jordanian higher education institutions to be open and interact with international institutes and organisations in charge of accreditation and quality control. It also aims to develop higher education using international norms and standards.

According to the Accreditation Law, the HEAC develops accreditation and quality control criteria, ensures that higher education institutions abide by such criteria and other relevant laws and regulations, accredits institutes and their programs and ensures that institutions conduct self-assessment. Both public and private universities fall within the mandate of the HEAC. Establishing private higher education institutions needs the approval of the Board of Higher Education. There is a well-defined procedure concerning the application form and documents that should be submitted for this purpose. In general, the application should be well justified to secure the approval of the Board, especially as there are now about 20 private universities in Jordan and all geographic areas and programs of study are covered by private and/or public universities. Public universities are established, based upon a recommendation of the Board of Higher Education and endorsed by a Royal Decree.

In order to keep pace with the massive and rapid expansion of higher education institutions (HEIs) in Jordan, regulatory step have been adopted to ensure its quality and raise its level to maintain excellence and competitiveness. In the period from 1990 to 1999, the Council of Higher Education supervised the accreditation and quality assurance of HEIs. Then, the responsibilities were shifted to the Accreditation Council from 1999 to 2007 where the standards for Institution (general) and program (specific) accreditations were implemented to supervise and follow up the activities in private universities. Higher Education Accreditation Commission (HEAC) then replaced the Accreditation Council with issuing Act (20) for the year 2007 dated 25/3/2007. It was published in the Official Gazette No. (4821) on 16/4/2007, and the work according to this act was begun on 15/6/2007. This act gave HEAC financial and administrative independence. Then, HEAC worked on the formulation of its vision, mission and strategic goals in an institutional methodology to promote higher education into world-class levels. In 2008, the National Center for Tests was established by Law No. (75) under the umbrella of HEAC to conduct tests and utilize tools to measure activities of HEIs in terms of their inputs, processes, and outputs aiming to the ultimate goal of ensuring quality.

To attain the purpose of establishing HEAC, a strategic plan was drawn by a committee of Jordanian experts consisting of goals and objectives. The main goals of this plan can be summarized as follows:

- Developing program accreditation standards and institutionalize procedures of implementation and follow up.
- Ensuring development and updating procedures and mechanisms of quality assurance and applying it in HEIs.
- Determining and measuring outcomes of academic programs offered by HEIs and set criteria and assessment tools that indicate the achievement of objectives.
- Openness of HEIs on regional and international institutions that are responsible for the development of higher education and quality assurance.
- Competitiveness among Jordanian HEIs based on ranking in line with international standards and criteria.
- Implementation of quality standards in all HEAC departments and units.

HEAC QA E-Learning Criteria	ESG Traditional and E-Learning Criteria
Criterion Number and Title	Standard Number and Title



1- Vision, Mission and Objectives [a. Mission and objectives b. planning and efficiency]	1- Institutional Policy for QA 8- Public Information
2- Financial Resources	6- Learning Resources and Student Support
3- Program Design	2- Design and Approval of Programs 9- On-going Monitoring and Periodic Review of Programs
4- Manageability of E-learning Programs [a) Manageability b) Effectiveness of Manageability]	6- Learning Resources and Student Support 7- Information Management
5- Students Services	4- Student Admission, Progression, recognition and Certification 6- Learning Resources and Student Support
6- Instructional Design, Course Development and Evaluation	3- Student-Centered Learning, Teaching and Assessment 5- Teaching Staff
7- E-Learning Infrastructure	6- Learning Resources and Student Support
8- Accessibility and Management of Learning	-
9- Learning Experience Evaluation	10- Cyclical External QA

Combine 4 & 8
Combine 6 & 9
Combine 2 & 7

In that respect any QA system should be well adapted to different modes of changes that can be experienced in e-learning and to the rationality in the use of resources devoted to QA.

First Standard: Vision, Mission and Objectives

Institutions should have a policy for quality assurance in which e-learning is included, with particular references at different levels and according the type of educational offer, considering the selection and use of e-learning technologies or taking into account the training of staff for the implementation of e-learning approaches, etc.). This policy is made public and forms part of their strategic management. Internal stakeholders should develop and implement this policy through appropriate structures and processes, while involving external stakeholders. In addition, institutions should publish information about their activities, including programs, which is clear, accurate, objective, up-to date and readily accessible. Information on institutions’ activities is useful for prospective and current students as well as for graduates, other stakeholders and the public. Therefore, institutions provide information about their activities, including the programs they offer and the selection criteria for them, the intended learning outcomes of these programs, the qualifications they award, the teaching, learning and assessment procedures used, the pass rates and the learning opportunities available to their students



as well as graduate employment information. This process requires continuous planning to ensure the achievement of such program's objectives and mission, as well as, to evaluate the level of this achievement. These evaluation results should determine the issues that should be targeted by analyzing data and information to tune the policy, mission, vision, objectives and procedures.

Guidelines

Policies and processes are the main pillars of a coherent institutional quality assurance system that forms a cycle for continuous improvement and contributes to the accountability of the institution. It supports the development of quality culture in which all internal stakeholders assume responsibility for quality and engage in quality assurance at all levels of the institution. In order to facilitate this, the policy has a formal status and is publicly available. It must take into account both the national context in which the institution operates; the institutional context and its strategic approach. To ensure that the policy translates into practice through a variety of internal quality assurance processes, the following guidelines should be taken as a reference:

- The online component supports each university's mission, values, and strategic plan which will be revised and updated periodically.
- Put in place policies that address the intellectual property of the resources produced for each online course.
- Planning and allocating resources (including technical and administrative personnel) for the online components of the degrees to effectively support this mode of delivery of knowledge.
- Device procedures to verify and validate the identity of the students participating in the online course or degree by means of providing a secure login and password to the VLE, offering monitored exams, or using technologies that verify student's identity, biometrics such as photo and keystroke dynamics.
- The internal quality assurance ensures that all resources are fit for purpose, accessible, and that students are informed about the services available to them.
- In case of joint programs between two universities, expertise from both university must work together to provide and develop the entire program.

Indicators

1. Mission, vision and objectives shall be clear to all staff, adopted by various councils, and periodically reviewed.
2. Mission, vision and objectives shall be published as brochures and manuals (printed and electronically).
3. Procedures to achieve objectives, mission and vision shall be documented and easy to be accessed.
4. Objectives shall be consistent with mission, vision, values, and strategies based on human, physical and financial resources
5. All pedagogical activities shall be addressed to objectives, including the policy of admission, selecting faculty members, planning and dissemination resources.
6. Public services programmes shall be in accordance with its educational objectives and community needs.
7. Clear plans, processes and mechanisms to develop and ensure the achieved objectives and missions should be provided.
8. Program, assessment, planning and various activities (teaching, research, and community services) shall be engaged in line with objectives and mission.



9. All stakeholders (top management, staff, faculty members and students) shall be involved in planning and evaluation process.
10. Continuous planning and evaluation shall be used to a better dissemination of resources and improvement of programs activities.
11. Planning and evaluation shall be used to determine the priorities of improvements and development.
12. Necessary requirements must be available to ensure the efficiency and effectiveness of planning and evaluation process.
13. Evaluation of program and its processes shall be regularly reviewed and documented.
14. Findings of planning and evaluation shall be used to display the efficiency of proofs and indicators.

Second Standard: Financial Resources

Institutions should have appropriate funding for learning and teaching activities and ensure that adequate and readily accessible learning resources and student support are provided. Institutions provide a range of resources (physical and human) to assist student learning with special attention to e-learning environment. Ongoing activities of financial planning and setting budget shall be in line with objectives of program.

Guidelines

For a good higher education experience, institutions should provide financial resources to assist student learning. These resources vary from physical resources such as libraries, study facilities and IT infrastructure to human support in the form of faculty member, counselors, tutors, and advisors. The role of financial support services is of particular importance in facilitating the mobility of students within and across higher education systems. Financial support should be evenly allocated among student-centered learning and flexible modes of learning and teaching. In addition, the role of financial support should take into account the development of capabilities for administrative and academic staff.

Indicators

1. Institutions shall be financially capable to present efficient educational services in line with their mission and objectives and committed to students enrolled in electronically designed programs, as well as to ensure the continuous budget for programs offered to students.
2. Institution shall be committed to provide the financial support needed to ensure the presence of qualified staff and faculty members and technical support.
3. Offered programs shall be consistent with missions and objectives of the institution, and provide the financial support needed from various resources.
4. The availability of audit and financial internal control program that is responsible for financial control procedures.
5. Clear policies and legislations shall be available and applied to the management of the financial procedures.
6. Programs shall provide future financial plans that ensure the sustainability of achieving the plans of expenditures as well as the income plans for at least 3 years.
7. Proofs of commitment of providing suitable financial resources shall be presented and used as a support to e-learning programs.



8. Financial stability shall be presented. In case of Fiscal deficit, remedial and alternative plans by governance council shall be provided to reduce this deficit.
9. Annual budget including policies and developed plans shall be disseminated to all stakeholders.
10. Institution shall display the adequacy of financial resources.

Third Standard: Program Design

Institutions should follow national and institutional regulations concerning the design and the approval of those programs that need to be referred to the national qualifications framework for higher education. The use of e-learning strategies, partially or fully, in programs referred to the national qualifications framework will require concrete quality assurance measures. In that respect, it seems reasonable to:

- Facilitate the participation of the stakeholders, internal and external, in the design of the programs
- Promote the stakeholders participation in quality assurance procedures
- Ensure the quality of teaching activities that developed with or carried out with other parties
- Set up a process to review periodically the adequate use of technology in e-learning environments.

Moreover, institutions should monitor and periodically review their programs to ensure that they achieve the objectives set for them and respond to the needs of students and society every specified cycles. These reviews should lead to continuous improvement of the program. Any action planned or taken as a result should be communicated to all those concerned. This regular monitoring, review and revision of study programs aim at ensure supportive and effective learning environment for students.

They include the evaluation of:

1. The content of the program in the light of the latest research in the given discipline, thus ensuring that the program is up to date
2. The changing needs of society
3. The students' workload, progression and completion
4. The effectiveness of assessment procedures of students
5. The student expectations, needs and satisfaction in relation to the program
6. The learning environment and IT support services and their suitability for the program
7. Maintaining high quality programs in order to graduate competent and capable students.

Institution and Higher Education Accreditation Commission (HEAC) are partners to ensure the efficiency of the programs to keep up with technical and educational developments.

Guideline

Institutions should inform stakeholders on how they should set the programs and courses in a wider educational scene in accordance with the national qualifications framework. These programs and courses should be integrated with the national qualifications framework and quality assurance schemes. For this particular area, the distinction between e-learning program and other e-learning activities should be taken into account indicating to what extent these e-learning activities are integrated into the study programs as complements or they offered as independent components.

Indicators

1. Academic standards of offered e-learning programs shall be in line with offered traditional degrees, and shall follow the accredited standards according the already set regulations.
2. The design of the programs shall be consistent with learning objectives, e-learning strategies of teaching, content of scientific materials, patterns and standards evaluation.



3. Fair and reasonable opportunities for students shall be provided to complete the required levels for graduation.
4. Clear and specific mechanism for continuous evaluation from inside and outside the institution should be available and subject to be reviewed and re-accreditation periodically.
5. Institutions shall display its commitment to international standards related to teaching and learning by providing human, material, financial and technological resources to support effective e-learning programs and to facilitate students activities to accomplish program objectives.
6. Quality of e-learning academic standards shall match the quality of academic standards of traditional programs.
7. Learning objectives of program shall be in line with e-learning teaching strategies and content knowledge of courses and strategies evaluation.
8. Courses content and methods of teaching and evaluation shall be consistent, taking into account students' individual capabilities and skills.
9. Special forms to determine the mechanism and standards for internal and external assessment are to be provided.
10. Program design and courses shall include the student-student and faculty-student interactivity through notes or survey or other measures.
11. Learning needs of enrolled students shall be related to e-learning objectives and learning outcomes.
12. Comprehensive and integrated e-learning programs shall be designed to ensure logical sequence and depth and include learning strategies and outcomes assessment methods.
13. Each program shall determine various cognitive domains and have a clear definition and content of intellectual skills, creative abilities, competencies, professional skills and attitudes to be acquired by students.
14. Institution shall be committed with the timeframe to complete the learning experience in accordance with the international standards.
15. Institution councils will be in charge of designing, developing and applying curricula with a clear and specific communication channels with faculty members who are responsible for the design, integration and implementation of such programs.
16. Policies and instructions (add or maintain courses from programs) shall be periodically reviewed according to local and international changes related to specialization.
17. Cancellation, developing and modifying programs shall take into account the enrolled students' rights to finish their programs.

Forth Standard: Manageability of E-learning Programs

Institutions should provide sequential information about learners and content, indicators on the achievements of learners and their educational level, and the content of "speak the same language," thus making it easier to effectively manage the system in order to achieve the academic standards of the granted degree. They should ensure that they collect, analyze and use relevant information for the effective management of their programs and other activities. Reliable data is crucial for informed decision-making and for knowing what is working well and what needs attention to ensure proper internal quality assurance system. The information gathered depends, to some extent, on the type and mission of the institution. The following are of interest:

- Key performance indicators;
- Profile of the student population;



- Student progression, success and drop-out rates;
- Students' satisfaction with their programs;
- Learning resources and student support available;
- Career paths of graduates.

Various methods of collecting information may be used. It is important that students and staff are involved in providing and analyzing information and planning follow-up activities.

Guidelines

1. Institutions should provide efficient administrative system to operate the educational services offered. This requires the appointment of:
 - a. Qualified academic faculty members, lecturers, trainers and tutors with e-learning experience capable of supporting and advising students in their path to graduation (student strategies and learning methods to achieve the intended outcomes to maintain the effective continuity).
 - b. Qualified technical staff for computer labs and library performing various tasks like planning for the use of technology in all academic services provided to them and responds to their requirements and their changing needs and continuous improvement to a better system.
2. The institutions should take into consideration the mobility of students, faculty members and staff within and across higher education systems as well as the needs of a diverse student population (such as mature, part-time, employed and international students as well as students with disabilities), when allocating, planning and providing the learning resources and student support.

Indicators

1. Institutions should appoint qualified faculty members with e-learning experience.
2. Institutions should provide a security system to protect the electronic database.
3. Updating and backing up data should be on periodical basis.
4. Flexible, up-to-date Website should be provided for e-learning programs that are easily accessible.
5. Learning management system shall be consistent with the mission and the objectives of the institution, and provide reports and information related to the students learning.
6. Learning management system should be flexible enough to manage and create various icons to allow faculty members to add academic activities, explanations, interactions and testing.
7. Personnel management system should provide portals for all stakeholders (faculty members, administrative staff, students, and parents).
8. Learning management system, personnel management system, and Website should be compatible with each other.
9. The availability of multimedia (video, audio and graphs) should illustrate the necessary steps of registration, downloading activities, conducting tests, and other educational events to the stakeholders.
10. The program should provide the proper procedures to train students and faculty members when adopting new programs and systems.
11. Institutions should provide a proper plan to control the quality of software packages, instructional media, tools and devices used.
12. Institutions should provide the necessary technical support for students (such as Help Desk) and provide communication service with the students by means such as email, phone and fax as well as, an official site for most frequently questions should be provided.



13. Clear mechanisms should be presented in the learning management system to follow up and ensure the quality assurance of inputs, processes and outputs.

Fifth Standard: Student Services

In the best interest of the individual students, programs, courses, institutions and systems, the institution should provide conditions and support that are necessary for students to make progress in their academic career. Institutions shall provide the following information:

- Accessibility to the institutions' policies, admission processes and procedures.
- Quick glance at program's introduction, requirement and curricula, program accreditation, program timetable, assessment methods, tuition fees, and means of students' interactions, adequate pedagogical strategies, fair student's certification mechanism. In addition to qualification gained, including achieved learning outcomes, levels, content and status of the studies that were pursued and successfully completed.
- Reliable processes to collect data on students, and actions on information on student progression.
- Appropriate recognition procedures rely on institutional practice for recognition being in line with the principles of the Recognition Studies, Diplomas and Degrees concerning Higher Education in the Arab States, and other international recognition bodies.
- The confidentiality of students' academic records and its accessibility.
- Information about the means of communication among students and methods to present academic works and ensure of receiving them by faculty members shall be defined.
- Complete and accurate information about course requirements, and techniques. This includes the needed technical training and support, course description, learning objectives, additional lectures, prescribed activities and tasks, accessing answers of questions and examinations.

Guidelines

1. Institutions should consistently apply pre-defined and published regulations covering all phases of the student "life cycle", e.g. student admission, progression, recognition and certification, as well as providing accurate, comprehensive, clear and updated information that can be easily accessed for students through transparent manner.
2. Institutions should have appropriate funding for students' services. However, the internal quality assurance ensures that all resources are fit for purpose, accessible, and that students are informed about the services available to them. In delivering support services the role of support and administrative staff is crucial and therefore they need to be qualified and have opportunities to develop their competences.
3. The role of support services is of particular importance in facilitating the mobility of students within and across higher education systems. At least for those programs delivered fully under e-learning schemes virtual mobility should be contemplated.

Indicators

1. Institutions should provide a comprehensive, accurate, and easily accessed handbook to all stakeholders including policies and procedures.
2. Institutions should provide documented procedures about program requirements to all students.
3. Institutions should provide clear mechanisms to inform students about technology and technical skills needed for registration.



4. Institutions should provide accurate and declared policies regarding students' capability to follow up on academic schedule.
5. Institutions should provide policies regarding mobility and transfer of credit hours in a program at the institution to another program or from institution to another one.
6. Institutions should implement procedures and mechanisms to maintain the continuity of the programs offered.
7. The website should provide the followings:
 - A program plan for each specialization, course description, objectives and needed techniques, guidance plan, an electronic database illustrating the courses completed by the student, financial information of each student, information regarding e-registration, cumulative and semester average, common frequently questions of students, support software to deal with the material content presented on the site such as (Media Player, Adobe Reader), information about the lecturer and how to communicate with him/her.
 - Follow up surveys to collect data student satisfaction on the steps and procedures implemented the program in each program.
 - Lists of suggestions and recommendations obtained from students and faculty to modify the plans and facilitate the implementation of the program.
 - The used strategies and practices to make a better interaction among student with the institution community.
8. The availability of well qualified staff to deal with student services programs.
9. Institutions should have clear policies and procedures to develop student services programs.
10. Allocate students resources on the basis of the actual needs and their suitability to support the offered services and programs.
11. Provide mechanisms to monitor the offered student services programs and assess their effectiveness.
12. Offering channels for students and faculty members contribution of in developing, managing and evaluating student services.
13. Institutions should have policies concerning the rights and responsibilities of students, as well as concerning the scientific rights and integrity.
14. Institutions should have clear statement concerning the privacy and confidentiality of students' academic rights.
15. Specific and clear standards should be adopted regarding assessment process (marks or grades). As well as polices governing the academic records and maintaining their security.
16. Clear policies and procedures about the authentication of students grades at all levels.
17. Providing regular programs concerning academic, educational and professional records including opportunities that assist students to take academic decisions about their educational experiences and Employment.
18. The graduation requirements should be clearly and accurately defined.

Sixth Standard: Instructional Design, Course Development and Evaluation

Institutions should ensure that the programs are designed and delivered in a way that encourages students to take an active role in creating the learning process, and that the assessment of students reflects this approach. Institutions should be responsible for the quality and competence of their staff and for providing them with a supportive environment that allows them to carry out their work effectively. They should apply fair and transparent processes for the recruitment and development of



the staff. The implementation of e-learning processes facilitates the incorporation of sophisticated teaching services that can be provided by experts belonging to other organizations. In that respect, it should be recommended to have a proper process of appraising this indirect incorporation of teaching staff or teaching teams to the programs. Instructional design needs effective professional development and training for faculty members, organizational commitment to provide adequate support for the program, the selection of appropriate technology and infrastructure, focus on students learning outcomes, setting teaching programs design and systems that intend to be piloted before adopting, providing all requirements in order to maintain the desired level of quality, requiring organization synchronous models of modernization which requires the presence of multiple elements of self-management skills, and the ability to access the solution immediately. Institutions should consider the importance of assessing students' progression and their future careers, quality assurance processes for assessment.

A team of experts should be in charge of developing and producing e-learning courses due to the fact that several roles needed for designing online courses: content expert, pedagogical expert/course-designer, technical and media experts and instructors/tutors.

Guidelines

- Student-centered instruction should be considered during the course development process.
- Assessment of prior knowledge of students regarding whether they possess the technology skills and equipment required by the course design.
- Student support system must be established to address student questions, technical problems as well as academic and career counseling throughout the online degree.
- Faculty should receive technical assistance during the online course development as well as initial training, assistance, and support to prepare to teach online. Such initial training should emphasize the amount of engagement concerning their online teaching and the mode of delivering it (amount and frequency of feedback, faculty-student communication, grading system and ways for the students to access that information).
- Teaching and learning materials shall be accurate and sustainable to learner needs, and should be prepared by experts.
- Design of instructional materials should provide an easy-to-use technology, allowing the use of multimedia consistently, subject to intellectual property rights, and consistent with the information and communication technology standards.
- Developing and implementing programs should go along with the basic known principles of teaching taking into account the specificities and the requirements of e-learning system.
- Curriculum and multimedia shall be up to date in terms of instructional material and the diversity of resources that fit the quality of learner needs and be appropriate with the learning outcomes.
- Special attention should be paid to improving students' abilities in order to solve problems taking into account individual differences. This can be done by providing mechanisms for improving the instructional material, teaching strategies and evaluation process that based on the continuous feedback.
- The diversity of learning resources and teaching materials should be easily accessed taking into account intellectual property rights.
- The evaluation should focus on providing students with higher order cognitive skills that improve their knowledge, competences and skills.



- Encourage a sense of autonomy in the learner, while ensuring adequate guidance and support from the teacher; - promotes mutual respect within the learner-teacher relationship;
- Assessment is consistent, fairly applied to all students and carried out in accordance with the stated e-learning procedures.
- The diversifying student population requires the changing role of the teacher focusing on student-centered learning and teaching.
- Institutions should set up and follow clear, transparent and fair processes for staff recruitment and conditions of employment that recognize the importance of teaching.
- Institutions should promote innovation in teaching methods and the use of new technologies.
- Institutions should encourage scholarly activity to strengthen the link between education and research.
- Institutions should make sure that staff and faculty are familiar with existing testing and examination methods adapted to the e-learning environment and receive support in developing their own skills in this field.

Indicators have policies concerning the mechanisms and assessment procedures to assess the level of students' achievement, and regarding the updating Standards and degree-granting measurement tools covering all the learning outcomes of cognitive skills;

- Regular evaluations and adjustments on the modes of delivery and pedagogical methods.
 - The criteria and the method used for students' assessment as well as the criteria used for marking are published in advance.
 - The assessment allows students to demonstrate the extent to which the intended learning outcomes have been achieved.
 - Students are given feedback that includes their e-learning experience, which, if necessary, is linked to advice on the learning process.
 - Where possible, assessment is carried out by more than one examiner.
 - Institutions should offer opportunities for and promotes the professional development and training of teaching staff.
 - Institutions should provide an electronic library (including database) for students to facilitate the accessibility in order to improve their skills and knowledge.
1. Institutions have policies regarding the design of each course teaching in terms of implementation and updating.
 2. Institutions have policies concerning the intellectual property rights for programs and e-learning curricula offered by other institutions.
 3. Curriculum and multimedia are up-to-date in terms of content and the diversity of the resources used in the implementation of decisions
 4. Institutions focus on students' continuous learning skills (teamwork skills, communication skills, and computer skills) through programs
 5. Programs include opportunities to develop and demonstrate higher order skills of analysis, understanding, effective communication and research.
 6. Institutions provide electronic up-to-date library services that support the needs of e-learning students.
 7. Institutions develop a mechanism to provide feedback for students' activities electronically.
 8. Continuous follow-up regulations are implemented on the level of students' performance and expected learning outcomes.



9. Institutions clearly define the learning outcomes and the expected of student achievement for each of the offered programs.
10. Institutions periodically review programs and courses.
11. Institutions have data on the students' assessment of faculty members, e-learning courses and administrative processes during the implementation of the courses.
12. Institutions should have regulations concerning plagiarism and illegal activities.
13. Institutions have regulations concerning students and faculty members satisfaction on the facilities provided to implement the e-learning courses.
14. Institutions have regulations concerning the confidentiality and integrity of the academic and administrative information for all staff and academic members, as well as students' records and individual privacy.

Seventh Standard: E-Learning Infrastructure

Institutions should have appropriate funding for learning and teaching activities and ensure that adequate and readily accessible learning resources and student support are provided. For a good higher education experience, institutions provide a range of resources to assist student learning. In order to ensure successful learning and teaching, institutions would have to provide solid infrastructure to support students and staff. The using of Digital courseware, online repositories for educational material, tools management systems and student portals are for content development and course management. Infrastructure would provide students and faculty members with a high degree of reliability and accessibility. High infrastructure would provide protection of data and communications and make it possible to develop usable and integrated learning elements, could be stored and retrieved. Assisting to avoid the problems of translation and communication and exchange of information and provide solutions clearly, as well as to provide technical support for all hardware, software needed to implementation of e-learning process

Guidelines

- Institutions should pay special attention to areas such as e-learning platforms, counseling in e-learning environments, educational materials for e-learning, virtual access to digital resources.
- The role of support services is of particular importance in facilitating the mobility of students within and across higher education systems. At least for those programs delivered fully under e-learning schemes virtual mobility should be contemplated.
- The needs of a diverse student population (such as mature, part-time, employed and international students as well as students with disabilities), and the shift towards student-centered learning and flexible modes of learning and teaching, should be taken into account when allocating, planning and providing the learning resources and student support.
- Support activities and facilities may be organized in a variety of ways depending on the institutional context.
- The internal quality assurance should ensure that all resources are fit for purpose, accessible, and that students are informed about the services available to them. In delivering support services the role of support and administrative staff is crucial and therefore they need to be qualified and have opportunities to develop their competences.

Indicators

1. Institutions provide policies concerning infrastructure to keep up with latest developments.



2. The availability of technical and physical infrastructure to ensure better e-learning programs.
3. Institutions have rules and regulations concerning special needs students.
4. Infrastructure should meet the requirement of the e-learning courses (student and teacher interaction, student and student interaction).
5. Institutions have appropriate financial plan to sustain quality and foster technological infrastructure.
6. Institutions provide efficient internet connectivity required for the program.
7. Institutions should provide servers to host and disseminate all online materials and administrative data and records.
8. Special security measures to protect confidentiality of data from hackers should be available.
9. The availability of backup systems and alternative solutions in case of malfunctions in the main system.
10. Institutions provide appropriate Learning Management Systems (MLS) that is compatible with other programs.
11. Institutions provide 24-hours help desk in case of emergency and frequently asked questions.
12. The availability of centralized or decentralized system of technical support within specific time to provide technical and software support.
13. Institutions provide training workshops for hardware and software maintenance.
14. Institutions provide an internal assessment system to check the appropriateness of the technical system used.

Eighth standard: Accessibility and Management of Learning

The availability of effective channels leading to content of the e-learning program and active learning tools are essential for a successful e-learning process. It is expected from the institution to show interest in the development and reinforcement of self-learning, to enable learners to control their instructional growth, and to make easier to facilitate interaction and communication between student-institution, teacher-student and student-student. Students shall have access to the content in an appropriate time. Also, institutions should have an appropriate storage capacity available for all users. Institution should utilize active learning methods to develop an interactive communication and assessment skills. Institutions must achieve portfolio and written tests that is appropriate to teachers' and students needs and circumstances, and as well as to develop the digital archive essential in the electronic achievement portfolio.

Guidelines

- In addition, institutions should set realistic goals and methods to ensure achieving these goals.
- Institutions must have mechanisms to monitor and manage the timing and progress of teaching plans as well as synchronous and non-synchronous remote communication, while providing feedback on written and verbal assignments as well as self-assessment tools.
- Written and verbal tests that are appropriate to students and faculty needs should be available.

Indicators

1. Institutions must utilize networks and social media.
2. Institutions must provide active communication channels to implement the e-learning programs in order to provide electronically synchronous non-synchronous technical assistance (interactive videos, phone calls, chatting websites and e-mails).



3. Institution must provide effective procedures to facilitate the use of the e-library and database related to students and faculty members' educational needs.
4. Institution must have a preset academic calendar and timetables indicating dates of tests, major activities for students, faculty members and trainers.

Ninth standard: Learning Experience Evaluation

Institutions should undergo external quality assurance incompatible with the HEAC criteria on periodically basis. External quality assurance in its various forms can verify the effectiveness of institutions' internal quality assurance, act as a main factor for improvement and offer the institution new perspectives. It will also provide information to assure the institution and the public of the quality of the institution's activities. E-learning development system must include an independent evaluation to enhance the outcomes of learning (specifically from users' viewpoint)

Student learning evaluation is one of the essential components in the learning process due to the fact that it is appropriate for formative and summative evaluation which takes care of the programs nature, students' needs and nature of learning activities. This is appropriate to evaluate the students' achievements and the competences set for the program. This evaluation method must be carried out in a transparent way and must be trusted according to the academic standards. The summative evaluation and determining the results must be carried out under the direct supervision of the institution. The institution must hold a systematic and periodic review for the used evaluation procedures, and to modify it whenever required depending on the feedback.

Students expect that this pattern of learning would include up-dated procedures for final assessment that take the programs' circumstances as well as learners' needs and the nature of learning in the final evaluation of the program. The assessment procedures should be carried out according to the academic standards and should be performed under the direct supervision of the institution. The institution should hold periodic reviews, alteration and development of the measures and procedures depending on the feedback.

Guidelines

The distinction between e-learning programs and other e-learning activities should be taken into account indicating to what extent these e-learning activities are integrated into the study programs as complements or independent components. Special quality assurance unit should be in charge of all e-learning activities and e-learning component as well as all assessment and learning experience evaluation.

Indicators

1. Objectivity, transparency, accuracy and standardization should be provided for all midterms and final tests and maintain confidentially.
2. Procedures of used evaluation for all programs should be comprehensive, valid and reliable.
3. The institution engages in comprehensive transparent assessments and measurements
4. Variety of procedures and learning tools must be used to evaluate courses taking into consideration the nature of course and the expected learning outcomes and the nature of the students and their abilities.
5. Institution provide general framework to organize the evaluation and the implementation of the students indicating the nature of the used tools and the implemented procedures and timetable to conduct the tests or submit the research assignment or any other evaluated activities.



6. Institutions have clear and specified criteria in order to evaluate the courses (students' opinions, objective, and view of experts).
7. Information and data indicator are available indicating the degree of success of the procedures for the academic program related to e-learning.
8. Data are provided to demonstrate the extent of students' satisfaction of the implemented evaluation procedures and its appropriateness for the nature, and the degree of its transparency concerning the e-learning program.
9. The data shows the consistency of programs objectives with evaluation procedures.