



Institutional E-Learning Policy Guideline for Higher Educational Institutions in Ethiopia



Ministry of Education

Foreword

The world is becoming increasingly digital with Higher Education Institutions (HEIs) having the highest footprints in the cyberspace. This demands Ethiopia's HEIs to embrace and adopt ICT into their institutional make-up to be aligned with the global trend and improve the teaching-learning outcome. Particularly, the adoption of e-learning technologies enables them to meet the rising demands of both students and teachers for a technology-based education system and achieve the educational policy goals of ensuring access, relevance, and quality education in- the country. This e-Learning Policy Guideline will serve as a basis for designing respective e-learning policy guidelines that fit the needs and requirements of each local institution. The e-Learning Policy Guideline is designed to ensure that e-learning courses are accessible, learner-centric, effective, and aligned with the national education policy objectives and goals. It also sheds light on academic integrity and intellectual property rights, as well as ethical behaviors and conduct in the cyberspace, to protect learners' privacy and e-learning resources security.

The ministry encourages the development of quality e-learning materials and the integration of e-learning systems to create opportunities for flexible life-long learning that is not bounded by space and time. As a result, HEIs are expected to exploit state-of-the-art e-learning technologies to launch online programs or blend the existing face-to- face programs with online ones to enrich the increasing demand for higher education. The Ministry's commitment to invest in HEIs will enable it to continuously reinvigorate the education system at the tertiary level. The "e-Learning for Strengthening Higher Education (e-SHE)" initiative is one of the MoE's initiatives set to transform the Higher Education system starting from the admission of students and teaching-practice, all the way to the issuing of degrees and certificates.

MoE has made a significant investment in preparing the necessary prerequisites such as building ICT infrastructures, designing relevant policy and strategy documents, and establishing the necessary organizational structure to promote the digital education system in HEIs. The MoE initiated this e-Learning Policy Guideline to guide the designing of e-learning policies at the institutional level. The e-Learning Policy Guideline will also help HEIs to design their own e-Learning Management Structure develop e-Learning content, establish staff development programs concerning e-learning, and institutionalize e-learning in their respective institutions.

I applaud the initiative to produce the e-Learning Policy Guideline for Ethiopian HEIs. The Guideline will undoubtedly provide a favorable ground to promote and expand e-learning in the context of higher education in the country.

Sincerely,



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Minister, FDRE Ministry of Education

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Abbreviations

24/7	24 hours per day and 7 hours per week
BYOD	Bring Your Own Device
CEP	Continuing Education Program
eLMU	e-Learning Management Unit
eLMC	e-Learning Management Commission
EthERNet	Ethiopian Education and Research Network
HD	High Definition
HEI	Higher Education Institution
ICT	Information Communication Technologies
IDS	ICT Development and Services
IT	Information Technology
KPI	Key Performance Indicator
LMS	Learning Management System
MOE	Ministry of Education
MOOC	Massive Open Online Courses
OER	Open Educational Resources
OER	Open Educational Resources
SDG	Sustainable Development Goals
ToR	Terms of Reference
WiFi	Wireless Fidelity

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1 Introduction

We are in a period where the world is much more interconnected, and the barriers of distance and time are no more major obstacles. Thanks to the Internet, abundant educational resources are available and accessible for use. Human experts are nowadays not limited to their physical location to share their expertise and services which allowed multiple ways of collaboration to take place between teachers and students. This encourages teachers to create a more innovative e-Learning environment.

As a result, many Higher Education Institutions (HEI) these days exploit state-of-the-art ICT technologies to deploy their teaching-learning programs on e-learning platforms and are using blended learning strategies that combines both onsite and online delivery of content. Teachers are also encouraged to develop quality e-learning materials and design e-learning activities that create opportunities for lifelong learning with the convenience of learning anytime and anywhere.

The government of Ethiopia has recognized the use of ICT as a tool for development and has been taking measures on digitization of many services. As a country whose economy is currently among the fastest growing in Africa and in the world, Ethiopia needs to have more skilled and experienced labor to sustain its status and attain its developmental goals. As a precondition for this, there are clear indications that the nation is committed to a continuous and sustained investment in its higher education system.

The investments in the last couple of decades to establish dozens of new universities that are referred to as second and third-generation HEI is a reflection of this commitment.¹ The number of public universities has now reached more than fifty from very few before two decades, while more than five private HEI that had been at college levels promoted to full-fledged universities. Besides, more than 300 private colleges are operating as HEIs in the country. All these HEIs have enrolled close to two million students.

The Ministry of Education (MoE) of Ethiopia, with its vision to “Sustainably build an education and training system that ensures quality and equitable education for all citizens” aspires to produce a competent workforce to fuel the country’s economic development. As per the nation’s strategy, the MoE also believes that ICT is a critical means to attain its strategic vision. In this respect, though there are still works to be done, the MoE has made a lot of investment in preparing the necessary prerequisites such as building ICT infrastructures, designing relevant policy and strategy

¹ የኢትዮጵያ ፌዴራላዊ ዲሞክራሲያዊ ሪፐብሊክ የትምህርትና ሥልጠና ፖሊሲ፣ የካቲት 2015 ዓ.ም.፣ አዲስ አበባ።

documents, and establishing the necessary organizational structure to promote the digital education system in the HEIs [2, 3].

The projects of the Ministry such as strengthening the Ethiopian Education and Research Network (EthERNet), the five-year e-learning project known as “Strengthening Higher Education System through the utilization of Digital Technology”, establishing the National Education Cloud to improve and introduce technology as a means to alleviate chronic problems faced in the educational sector and the network and data center infrastructures built in the HEIs are indicators of its commitment to utilize ICT for Education. This policy guideline document is expected to fulfill the sectoral & institutional requirements and interests considering the global trends of digital intervention in the sector such as satisfying the relevant SDG goals,² SDG4.

The design of this Institutional e-learning Policy guideline was launched by the Ministry of Education to serve as a guiding principle for e-learning deployment among Ethiopian HEIs with the main focus of using ICT as an enabler for the accessibility and quality of teaching and -learning in the Ethiopian HEIs. The guideline helps each HEI to design its own institutional e-learning policy and deploy its own e-Learning Management Structure, select/develop an e-Learning Management System (LMS), develop e-learning content, establish staff development program with regards to e-learning and execute effective activities to recognize and make e-Learning part of the culture within the HEI community.

The vision, mission, and goals of this e-Learning policy guideline are stated below.

Vision

In line with the vision of each HEI in Ethiopia, the vision of the Institutional e-Learning policy guideline is to integrate and exploit the opportunities of the 21st-century skills of e-Learning practices in the agenda of the teaching-learning practices of the institutions for expanding higher education accessibility and improving quality of higher education.

Mission

The mission of the e-Learning Policy Guideline is to guide the institution in the planning, management, and deployment of e-learning activities within and beyond the HEI and enable academic units to adopt e-Learning programs effectively.

² *SDG4 one of the 17 goals of the UN that focuses on education and aims to “ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.”*

Goals

The goals of the institutional e-Learning Policy Guideline are to:

- a) expand access to higher education opportunities for local and international students through e-Learning and blended learning programs.
- b) use available 21st Century digital technologies to provide relevant and timely courses and training to enhance the learning experience by removing the barriers of both time and place.
- c) put digital tools at the disposal of learners to enroll and learn different courses from the comfort of any location and time without the need to be present on the campus.

2 Scope of the Policy Guideline

The Policy Guideline considers both private and public Higher Education Institutions in Ethiopia. It covers all types of e-learning, including synchronous, asynchronous, and blended modalities. The policy guideline addresses issues related to infrastructure, technology, content development, pedagogical approaches, assessment, accreditation, and quality assurance. It values collaboration and partnerships between different stakeholders such as government and non-government agencies, educational institutions, and private sector organizations. The policy guideline also addresses issues related to regulation and governance, including legal frameworks and ethical considerations.

3 Relationship with other Regulations

Legal and regulatory provisions that support institutional e-learning initiatives are critical for ensuring that e-learning is integrated into the national education system and that e-learning programs and resources meet quality standards and regulatory requirements. The key legal and regulatory provisions that support institutional e-learning initiatives include:

- a) ***National ICT in Education Policy (2023)***: The National ICT in Education establishes the legal framework for education and provides guidance on the implementation of education programs and initiatives. The policy includes provisions related to e-learning, such as the use of digital resources and technology in teaching. This guideline is designed in alignment with the national ICT in education policy.
- b) ***Digital education strategy and implementation plan (2023-2028)***: The digital education strategy and implementation plan is a comprehensive plan aimed at achieving the national education plan and the goals set by the ministry in achieving the country's digital transformation strategy, the goals of the AUs regional plan for the digitalization of the education sector, and the millennium development goal of education. Among other issues,

the strategy and implementation plan aimed at creating an enabling infrastructure for digital education in Ethiopia which is one of the core requirements in this institutional e-Learning policy guideline.

- c) ***National e-Learning Policy for Higher Education (2023)***: This guideline is designed in alignment with the national e-Learning policy.
- d) ***Governing academic Legislation of HLIs***: This guideline is designed in consideration of the governing academic Legislation of HLIs.
- e) ***Institutional ICT Use Policy (Acceptable ICT Use Policy)***: the technology use, security, privacy, and other governing ICT use policies are in alignment to this e-Learning policy guideline.
- f) ***Ethiopian Intellectual Property Laws***: Ethiopia is a member of the World Intellectual Property Organization. The Ethiopian Intellectual Property Office (EIPO) oversees Intellectual Property Rights (IPR) issues. The intellectual property laws of Ethiopia are governed by various proclamations, regulations, and directives. The Copyright and Neighboring Rights Protection Proclamation no. 410/2004³ (the copyright proclamation) came into force on 19th July 2004. The copyright proclamation was later amended by proclamation no. 872/2014.⁴ The implementing regulation was issued by the Council of Ministers under regulation no. 305/2014. The patent law of Ethiopia is governed by proclamation no. 123/95⁵ together with the Council of Ministers regulation no. 12/97.⁶ The patent laws regulate inventions, minor inventions, utility models, and industrial design. These copyright and intellectual property laws govern the ownership and use of intellectual resources and materials. The laws have implications on how e-learning materials are produced, distributed, and used legally and ethically, and that creators are fairly compensated for their work. The guideline is in alignment with these laws.
- g) ***Computer Crime Proclamation (2016)***: The Computer Crime Proclamation No.958/2016⁷ of Ethiopia is aimed to prevent, control, investigate and prosecute the suspects of computer crimes. It also protects the privacy and security of personal data collected and processed. Hence, this law ensures that learners' personal information is collected, processed, and stored appropriately.
- h) ***National e-Learning Program Licensing Standard and Guideline (2020)***: National e-Learning program Licensing standard and guideline establishes the standards and criteria

³ Proclamation No. 410/2004 - Copyright and Neighboring Rights Protection Proclamation

⁴ Proclamation No. 872/2014 - A Proclamation to amend the Copyright and Neighboring Rights Protection Proclamation

⁵ Proclamation No. 123/1995 - A Proclamation Concerning Inventions, Minor Inventions and Industrial Designs

⁶ Council of Ministers Regulations No. 12/1997 – Inventions, Minor Inventions and Industrial Designs Council of Ministers Regulations

⁷ Computer Crime Proclamation No.958/2016 - A Proclamation to Provide for the Computer Crime

for evaluating and accrediting e-learning programs and providers in Ethiopia. This standard and guideline ensures that e-learning programs and providers meet quality standards and are recognized and accredited by relevant authorities. This policy guideline supplements the national e-Learning program accreditation standard and guideline.

4 Situational Analysis

4.1 Data Collection

Primarily, the e-Learning for Strengthening Higher Education (e-SHE) project baseline data⁸ is used to understand the status quo in terms of readiness for e-Learning in the HEIs. This baseline study is a descriptive study with the aim of describing specific characteristics in e-learning implementation within HEIs key actors - ICT faculty, academic faculty members, leadership, and students. It is a cross-sectional study focusing on eligible respondents: ICT directorates, Deans and Vice presidents, Academic faculty, and students. Specific to infrastructure-related issues, ICT directors of 39 HEIs responded. Whereas on other issues, responses were collected from 42 public HEIs. This baseline data is supplemented by qualitative data from the Education and Training Authority (ETA) of Ethiopia through interviews on the practice, challenges, lessons learned, and future plans concerning licensing e-Learning programs in Ethiopia. Besides, the e-learning program licensing standard and guideline document and other relevant documents were reviewed.

As per the responses from ICT directors from 39 HEIs specific to infrastructure and resources, the e-Learning for Strengthening Higher Education (e-SHE) project baseline data revealed that:

- Of the total 39 HEIs 22 (55.0%) reported availability of a data center for hosting and supporting IT services with a dedicated power supply.
- Only eight of the HEIs (20.5%) reported the availability of a VPN in case of internet disruptions.
- Connectivity of the available PCs is found to be very low in academic units (2.4%) and administrative units (11.3%). Despite the large number of PCs available in academic units and registrar, the proportion of connected computers is found to be minimal.
- From the total 39 HEIs, only 5 (12.8%) of the HEIs reported the availability of a media lab (Addis Ababa Science and Technology, Bonga, Dembi Dolo, Dilla and Wolayta University).

⁸ E-Learning for Strengthening Higher Education (e-SHE) Project Baseline data (June 2023 – draft report)

- About 36% (14/39) of the HEIs reported that SIS is used to report academics and students-related information. However, very few HEIs (3/39, 7.7%) reported the integration of SIS and LMS.
- Seven HEIs have reported the availability of a policy or guideline for e-learning implementation. Among the seven HEIs with e-learning policies or guidelines, only one reported that the policy is currently implemented to govern e-learning implementation.

As per the responses from higher education leadership (vice deans and academic vice presidents) from 42 HEIs, the e-Learning for Strengthening Higher Education (e-SHE) project baseline data revealed that:

- The average score of readiness is higher among the top management as reported by both deans and academic vice president. The top management is reported to be interested in the full functionality of e-learning followed by the understanding of the importance of e-learning.
- Low score in the top management category revolves around ownership and accountability by the different departments and active engagement.
- Among the top management, awareness is reported to be relatively better than technological readiness. However, the scores in basic skills and knowledge to use e-learning, and preference for e-learning as compared to traditional methods is quite low.
- To improve e-learning implementation in the HEIs, major areas of improvement are the implementation of e-learning policy, curriculum alignment with e-learning, and inclusion of e-learning usage plan in course outlines.
- Staffs implementing e-learning are incentivized. The modalities of incentives are: based on credit hours and financial rules of the university, extra work payments such as weekends, and funding their projects.

As per the responses from Faculty members (N=574) from 42 HEIs, the e-Learning for Strengthening Higher Education (e-SHE) project baseline data revealed that:

- In terms of technical capacity, more than 90% of faculty members are skillful in either word processing or accessing pdf files. About 89% of faculty members know how to use several applications at the same time or between them. Likewise, 82.4% of the faculty members are skillful in using spreadsheet applications. About half of the respondents (55.7%) have a support staff on e-learning production and implementation. 66.3% of respondents used SIS before, and 55.7% attended online classes on e-learning followed by 53.6% of respondents engaged in e-learning course production and process.

- In terms of LMS and SIS utilization, 26.6% and 50.4% of respondents have access to LMS and SIS, respectively.
- Faculty members reported higher scores for basic skills to use the internet followed by basic skills to use computers, and future intentions to use e-learning. Unlike the leadership results, the top management and technological awareness reported a low score as compared to awareness.

As per the responses from students (N=764) from the 42 HEIs, the e-Learning for Strengthening Higher Education (e-SHE) project baseline data revealed that:

- A majority of the students reported access to any form of personal device (81.5%)
- The proportion of students who are skillful in saving and opening of documents is 90.4%, followed by basic functions of computers and hardware's (77.8%). About 68% of students reported that they have skills in software installation and configuration of settings. Technical skills in troubleshooting are one of the basic skills among students with a very low score (60.0%).
- A total of 215 (28.0%) and 230 (30.0%) students currently have access to LMS and SIS, respectively.
- Exposure related to training is quite low for most of the indicators. The proportion of students with exposure to students' success is 58%, utilization of SIS in the past is 57%, and prior training on e-learning is 51%. Half of the students reported that they have attended online classes (50%) and trained on the fundamentals of ICT in rapid skilling programs (50%). Very low scores are reported concerning exposure to LMS (49%), online learning activities (46%), course production (44%), selected digital skills in rapid skilling program (45%), and foundation of excellence in teaching online (37%).

4.2 SWOT Analysis

A Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis is undertaken to identify gaps between the current status quo and a desired future. This served as a basis to frame the institutional e-Learning policy guideline. In undertaking the SWOT analysis, the intention is to ensure that HEIs take full advantage of the available opportunities and potentials within the higher education sector as well as those created by the environment and associated global trends in higher education. Besides, it is to ensure that institutional e-Learning Policy guideline has strategies in place to reduce or counter the impact of the threats in the internal environment and. The SWOT Analysis is conducted based on the baseline data of the e-SHE project, document reviews, and key informant interviews. The analysis presented in this section is followed by major policy gaps in the next subsection.

Strengths

- Availability of a national education policy that promotes technology-enabled education.
- National e-learning program licensing standard and guideline developed and in use
- MoE's strong partnership with development partners
- National digital education and implementation plan (2023-2028)
- HEI's leadership willingness and commitment to support e-learning initiatives.

Weaknesses

- Inadequate human capacity at HEIs for e-learning content development and delivery at HLIs
- Limited human resource capacity at Education and Training Authority to exercise effective quality assurance and monitoring of e-learning programs in HEIs
- Failure to abide to copyright and intellectual property law while using e-Content (digital content) from other sources.
- Inadequate local funding for digital education initiatives. MoE has been relying on development partners to implement different digital education initiatives.
- Lack of awareness among private HEIs about the requirements to launch e-learning programs.
- Low track record of project implementation in HEIs.

Opportunities

- Government interest in strengthening higher education to meet the needs of the Digital Strategy 2025
- Growing demand for the provision and access to quality higher education in the country.
- E-Learning for Strengthening Higher Education (e-SHE) Project to enhance the capacity of the public HEIs
- Increasing investment in ICT infrastructure especially in public HEIs
- Availability of open educational resources accessible for free
- Availability of open-source e-content development platforms/tools
- HLIs policies and strategies encouraging autonomy and internationalization including opening international courses/programs.

Threats

- Effect of the volatile security issues on government as well as HEIs funding priorities
- Weak PPP (Public-Private sector partnership) in the HEIs
- Low access to devices due to the increasing device cost (Laptop, smartphone, etc.)

- Limited access to Internet and relatively high access cost. In Ethiopia, the average price of 1 GB is about 1 USD; and Ethiopia is ranked 71 (World rank) in terms of the average price of 1GB of data. This is higher than a significant number of other African countries.⁹
- Development partners limited commitment to avail funds required to realize digital education initiatives.

4.3 Policy Gap

The data on e-learning initiatives and readiness revealed lots of issues that need intervention to realize e-learning in the HEIs in Ethiopia. The following are found to be the major gaps that need policy intervention.

- *Awareness of the requirements to host/run an e-learning program:* Most HEIs' leadership are not aware of the basic features and core requirements of an e-Learning program. As a result, there is a mismatch between their expectation and the requirements in the national e-Learning Standards and Guidelines. Hence, there is a need for enterprise-wide acculturation initiatives.
- *E-Learning Content Design, Development, and Delivery:* There is a lack of sufficient and skilled manpower in the HEIs to develop and deliver e-contents. The e-Learning for Strengthening Higher Education (e-SHE) Project is a huge step to enhance the institutional capacity of the public HEIs. However, such initiatives shall be implemented on a continuous basis by the MoE as well as HEIs periodically in a planned manner.
- *Quality Assurance, Monitoring, and Evaluation:* So far, about thirteen private HEIs are licensed to run undergraduate and/or postgraduate e-learning program(s). As this is a new experience, it has been a major challenge for the national regulating body to license and ensure the quality of e-learning programs in the HEIs. On one hand, this is due to the capacity limitation of the authority to effectively exercise its responsibility, and on the other hand due to a lack of awareness of the requirements to run an e-learning program among the HEIs.
- *Intellectual property and Copyright:* Due to its peculiar nature, e-content is prone to intellectual property and copyright infringement. As per evidence from the National Education and Training Authority, violation of intellectual property and copyright law is widely noticed among the teaching staff in those private HEIs that are licensed to run e-learning programs. This may be because of a lack of awareness about such a law among

⁹ Selected Countries for Mobile Data Ranking. <https://www.atlasandboots.com/remote-work/countries-with-the-cheapest-mobile-data-in-the-world-ranked/>

the academic staff or due to the failure of the HEIs leadership to follow up and enforce such a law.

- *Infrastructure:* There is an increasing ICT infrastructure investment in the HEIs in the country. On the other hand, there is shortage of a dedicated LMS and full-fledged e-content development studios in the HEIs to develop and deliver e-contents. As part of the e-Learning for Strengthening Higher Education (e-SHE) Project, it is good that e-Content development studios are planned to be organized to enhance the institutional capacity of a few public HEIs. However, such initiatives are badly needed to realize and maintain the same in all other HEIs. In addition, the internet connectivity should be strong and stable both on campus as well as at the users' end to make effective use of the e-learning program implementation.
- *Funding:* Among other things, availing the infrastructure, infostructure, and running the capacity-building initiatives for e-Learning are cost-intensive endeavors. In a resource-constrained and volatile context like Ethiopia, devising a mechanism to sustainability fund e-Learning initiatives is unquestionable and needs policy intervention.

5 Components of the Policy Guideline

5.1 Governance and Organizational Structure

5.1.1 Governance

The implementation of e-learning in HEIs may differ due to their size, the number of programs they offer, and the organization of each of the institutions. A suitable governance and organization of e-learning system integrated into the existing system is critically required for its quick adoption and effective implementation. For its fast adoption and effective implementation of e-Learning programs, HEIs should be able to establish a dedicated e-Learning Management Unit (eLMU) whose sole responsibility is the deployment and management of e-Learning systems in alignment with the existing learning practices. This requires putting in place a governance structure that can enable effective integration and realization of e-learning in the HEIs.

A HEI level e-Learning Management Unit (eLMU) that can manage and coordinate resources and facilitate an effective and quality e-Learning services to the HEI community. This unit should hold an appropriate position in the organizational structure of the HEI that empowers it to effectively realize its responsibilities.

Each HEI should set a governance mechanism for e-learning programs of its academic units in a way that can ensure the effective deployment, usage, and services by the HEIs and that it is in alignment to meet the requirements of the National e-Learning Policy and the strategic plan of the

institution. The person appointed to lead the e-Learning Management Unit should possess the level of a director and must be a senior academic staff, preferably with an IT and/or education background, with proven experience in e-learning and with good leadership quality. The director of the unit should be well-informed of local and global e-learning status, trends, and advancements. The director may be assigned by the top academic management of the institution based on the existing selection process for directors.

The central e-Learning Management Unit:

- a) Must regularly report to the top academic management of the HEI on the deployment and development of e-Learning within the institution.
- b) Should strengthen itself with technically competent and appropriately trained members to support the implementation and to ensure good governance and effective deployment of e-learning programs.
- c) Should manage and maintain the e-Learning platforms and databases and ensure that efficient infrastructure is available for e-Learning deployment.
- d) Should create competence in the technical aspect of e-Learning (LMS, databases, servers, etc.).
- e) Should make sure that its members are adequately trained to be knowledgeable on the current status and the trends of e-learning technologies.
- f) Takes the responsibility to provide sufficient support to the staff members of the HEI.
- g) Should deliver regular professional development training related to e-learning to the academic staff of the HEI.
- h) Makes sure that e-learning trainers are compensated for their effort and time based on the rules and regulations of the HEI.

Based on the institution's size, the number of programs, and the requirements in the HEI; the central e-Learning Management Unit may establish an e-Learning Management Commission (eLMC) at the HEI level to oversee, coordinate and govern the operationalization and direction of the overall e-Learning agenda of the HEI. The commission should consist of representatives such as the head of ICT Services, the head or representative of the IT relevant Academic units, the head or representative of the relevant Education or Pedagogy academic unit, representative(s) of the e-learning management coordinators at college and/or academic unit levels, etc.

If established, the role of the e-Learning Management Commission will be:

- a) To look after trans-college level issues within the HEI,
- b) To evaluate the progress of the integration of e-Learning as a method in the existing teaching-learning programs of the HEI,
- c) To facilitate inter-college collaboration on matters of e-Learning, etc.
- d) To decide on common matters of on e-Learning programs within the HEI.

5.1.2 Organizational Structure

The e-Learning Management Unit (eLMU) is established to run the national agendas of e-Learning under the HEI. The senior management of the HEIs must be committed to providing the eLMU with appropriate, office, staff, support, and funding. Based on the size, the organization of the HEI, and the method it follows for effective realization of e-learning, the eLMU could be established as a stand-alone entity or can be part of any existing Teaching and Learning Unit/Centre. When the size of the HEI is big and deals with several colleges, the eLMU with the support of the HEI may establish an e-Learning Commission that oversees the operationalization and direction of the overall e-learning agenda of the HEIs in a participatory, fair, and inclusive manner. The top academic management of the HEI should assign a director to the eLMU.

a) The Director of the eLMU

The director of the eLMU will have an office and support staff at the HEI level. The director of the HEI's eLMU will be a member of the appropriate institutional level academic commissions or decision-making body to promote e-learning opportunities and activities within the institution. The eLMU works in collaboration with the ICT development and service unit of the HEI and to the unit of the HEI that is responsible for the extension of the Continuing Education Program (CEP) to facilitate e-Learning initiatives. The institutional eLMU coordinates and facilitates, the necessary infrastructure and the resources for effective implementation of e-learning to realize the vision and objectives of the institution. The institutional eLMU works closer to colleges and the academic units of the institution to solve resource problems, select platforms of e-learning and avail them for use, and to follow up its effective utilization in consultation with the e-Learning Coordinators. The director of the eLMU communicates with higher management of the HEI and other stakeholders for effective implementation of e-learning in the institution. The eLMU coordinates training for staff and students of the institution. It also works to solve the possible challenges of access to devices and the connectivity issues of the teaching-learning community within the institution. It communicates with college-/ academic unit-level e-Learning coordinators on the effective implementation of e-Learning. E-Learning coordinators will be selected for college- and academic-unit-level by the respective academic governing bodies.

b) The College Level e-Learning Coordinator

The College¹⁰ level e-Learning coordinator, who will be designated by the college, overlooks issues and requirements for effective implementation of e-Learning at the college level. It facilitates the approval of selected open courseware and certifications for use under the college in alignment to the programs of the academic units under its level. The College-level e-learning coordinator should be represented in the academic decision-making body of its level such as Academic Commissions to promote the effective implementation of e-Learning. The college-level e-learning coordinator communicates with the HEI's e-LMU director through the college-level administration for any higher-level decision on the effective execution of e-learning programs. The college-level e-Learning coordinator should be given the appropriate incentive such as course load reduction and/or financial benefits. The level of incentive should be decided by the college academic commission based on the level of service rendered by the coordinator.

c) The Academic Unit Level e-Learning Coordinator

The Academic Unit¹¹ e-Learning coordinator, is an academic staff of the unit who will be designated by the respective Academic Unit (AU), is responsible for creating a conducive environment at its level for effective implementation of e-learning at program or course level. It identifies challenges and finds solutions in collaboration with the college-level e-Learning coordinators and HEI-level eLMU. It also overlooks the process of implementation of e-learning programs under the academic units. The academic-level e-learning coordinator communicates with the college-level e-learning coordinator through the academic-unit-level administration for any higher-level decision on the effective execution of e-Learning programs such as resource sharing, staff and student training and on the usage of learning tools and techniques. The academic-unit-level e-learning coordinator should be given the appropriate incentive such as course load reduction and/or financial benefit. The level of incentive should be decided by the academic-unit-level academic committee based on the level of service rendered by the coordinator. The academic-unit-level e-learning coordinator is also responsible for supporting the other academic staff in the academic unit in the execution of e-learning courses. She/He may organize to give short training on learning management tools to staff and students of the academic unit in which he/she belongs.

¹⁰ What is stated for "College level" also applies for Faculties, Schools and Institutions.

¹¹ *Academic Unit refers to the units that run academic programs such as Departments.*

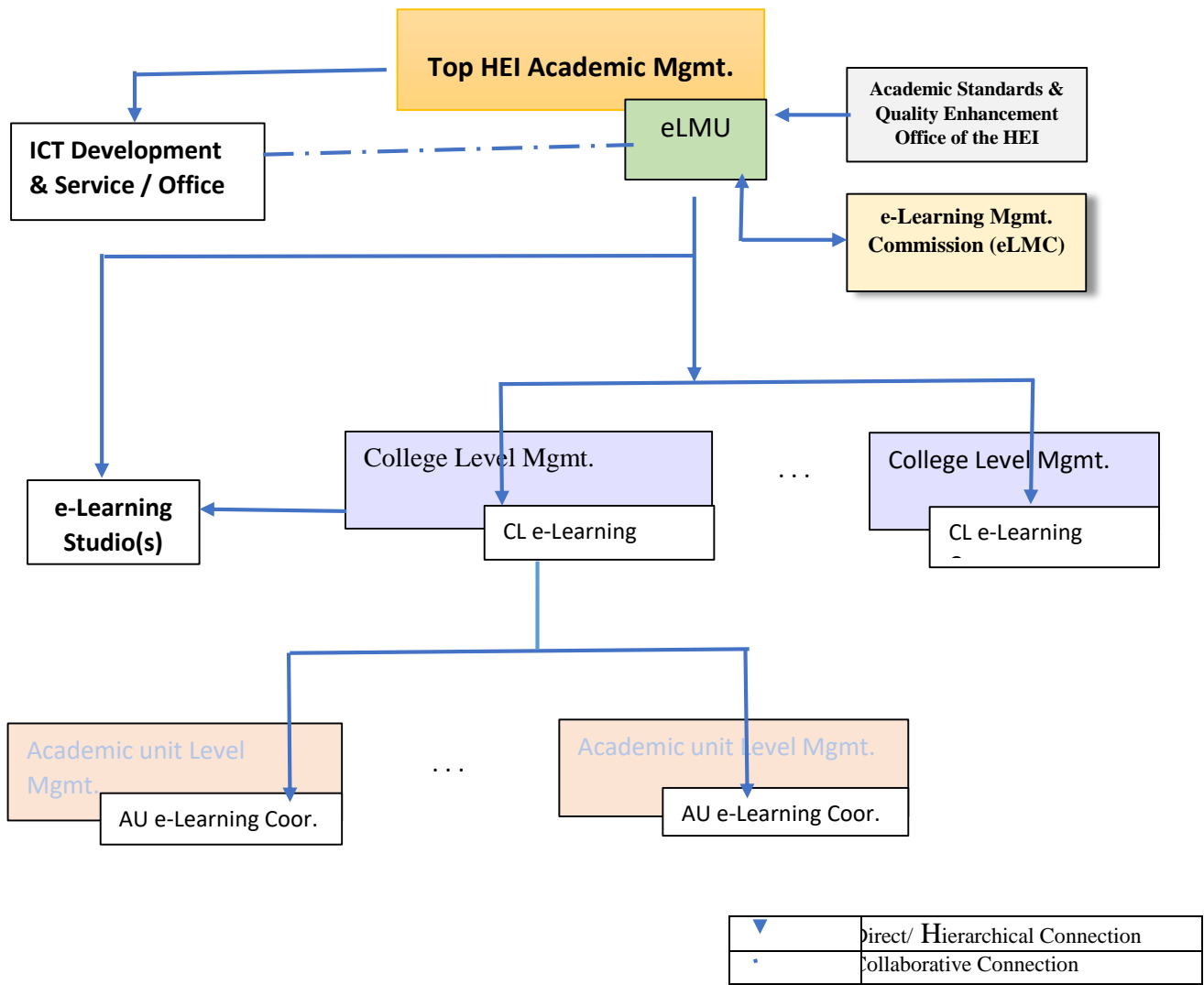


Figure 1: Organization Structure of e-Learning Management in HEIs

The top academic management at the university level refers to the Academic Vice President’s office. As a university may contain several colleges/ institutes/ faculties/ or Schools, the university-level academic management in consultation with the colleges decides which of the colleges should have college-level e-Learning coordinators and when. When the HEI is a college, the top academic management refers to the Dean’s office of the college, the faculty, the Institute, or the School.

As a college may constitute several academic units or Departments, the college-level academic commission decides which academic units should have academic unit-level e- Learning coordinators and when. The academic unit-level management refers to units that run academic programs such as Departments.

5.1.3 Roles and Responsibilities

The roles and responsibilities of the relevant parties involved in the use, design, and development of e-Learning programs and facilities in the HEI are stated as follows.

5.1.3.1 Ministry of Education (MoE)

The FDRE Ministry of education is responsible to:

- a) Develop guidelines for the implementation of electronic education; and makes improvements as required.
- b) Provide material, technical and training support to strengthen e-learning initiatives in the HEIs.
- c) Evaluate the performance of e-learning through continuous monitoring and evaluation.
- d) Make improvements by conducting a survey on the use of the tools and the effectiveness of applications.
- e) Support higher education institutions by establishing a system that allows them to share resources (digital infrastructure, courses, software, supporting educational tools).

5.1.3.2 The Top Management of the HEI

The HEI's top management is responsible for adhering to the national e-learning policy implementation and developing its own relevant policies for the execution of e-learning and blended learning in the institution. The top Academic management of the HEI designates the director of the eLMU. The term of office and the detailed terms of reference of the eLMU director are determined by the legislation of the institution for the term of office of a director. In a university setting, the top academic management is equivalent to the Academic Vice President Office. In an instance where the ICT Development and Service Unit is under the university's president of the HEI, the president is expected to set a mechanism where the eLMU and the ICT service unit can work in collaboration.

5.1.3.3 The e-Learning Management Commission

In instances, where there are a large number of colleges in the institution, an HEI-level e-Learning management commission, chaired by the eLMU director, may be established to realize the national e-Learning agenda and to facilitate the design, development, and implementation of e-Learning programs and courses in the different academic units of the institution. The commission shall also devise both short- and long-term plans to fulfill its responsibility and to cater to the future expansion of e-learning in terms of infrastructure, hardware devices, software, and security. The commission

should consist of the eLMU director as its chairperson, representatives of the e-learning coordinators of the colleges under the HEI, representatives of academic unit e-learning coordinators, the Director of ICT Services, representative of the HEI's Education/Pedagogy academic unit. The commission will meet at least twice per academic semester and decide on outstanding issues for the implementation of e-Learning.

5.1.3.4 The e-Learning Management Unit

The e-Learning Management Unit (eLMU) should serve as the responsible main unit for the planning, design, development, and implementation of the national e-learning policy in the HEI. With the support of the HEI management, the eLMU is responsible for activities such as:

- a) Planning activities of the eLMU.
- b) Preparing the annual budget and establishing a budget line request in the HEI's budget for e-Learning and e-Learning management activities.
- c) Searching project-based funding through collaborative activities of local and international organizations.
- d) Organizing the necessary training for instructors,
- e) Availing the necessary resources to instructors to design and develop e-learning content.
- f) Facilitating the processes for the availability of user manuals, tutorials, e-learning guidelines, and best practices for instructors.
- g) Monitoring e-learning activities in the HEI.
- h) Reporting to the HEI top management on the implementation of e-learning in the HEI.
- i) Conducting research and surveys on the effectiveness of e-Learning initiatives in the HEI to propose required improvements.
- j) Supporting academic units in providing user support on the use of LMS.
- k) Promoting the usage of LMS to the HEI community,
- l) Collaborating with the ICT Development and Service unit of the HEI for all required ICT services of e-learning and integrating LMS with other HEI systems, and
- m) Following up the backup of e-learning course contents for every semester and troubleshooting issues.

The eLMU can be organized as an office chaired by a director and having staff with the positions of an e-Learning System Administrator, an e-Learning Training Officer and an e-Learning Administrative Assistant. The appointment of the eLMU director is made by the top academic

management of the HEI based on the regulations for appointing a director. The appointment of the position of the e-Learning Training Officer is made in the position of a department head following the rules of appointing a department head from the relevant academic units. The terms, benefits, and incentives of a director and a department head apply to the positions held by the staff of eLMU. The e-Learning System Administrator and the e-Learning Administrative Assistant are employees of the eLMU.

The eLMU manages the e-Learning studio of the HEI. In case there are e-Learning studios under colleges, the college, particularly the college-level e-Learning coordinator will be responsible for managing its e-Learning studio. e-Learning studios wherever they are resources that should be shared by the academic units of the HEI.

5.1.3.5 Roles of e-Learning System Administrator

The e-learning system administrator deals with the managing and maintaining of the e-learning platforms in collaboration with the e-learning course Instructors to ensure its smooth operation, user satisfaction, and security. Their responsibilities encompass various aspects of the system's functionality and user experience of e-Learning Course materials. An e-learning system administrator plays a pivotal role in creating a conducive e-learning environment by maintaining the platform's functionality, security, and usability. Their efforts contribute to the success of both students and instructors using the system. The e-learning system administrator will have the position of a senior technical assistant upon employment and should have at least three years of experience as a system administrator. The qualifications required for the position of e-learning system administrator are indicated in Appendix A.

The e-learning system administrator works in collaboration with the ICT Service, the college level, and the academic unit-level e-learning coordinators. Some key roles and responsibilities of an e-Learning system administrator are:

- a) Make sure the setup and configuration of e-Learning Systems in collaboration with the e-learning course instructors and the ICT service of the HEI, including the installation and configuration of the e-learning platform software, set-up user accounts, roles, and permissions, customizing the platform's appearance, branding, and user interface.
- b) Ensure the effective realization of user Management.

- c) Follow up and support the realization of e-Learning course management and assist instructors in uploading course content (videos, documents, quizzes, assignments, etc.).
- d) Make sure that technical assistance is given to users.
- e) Troubleshoot and resolve technical problems related to user accounts, course access, or platform functionality, and ensure that response is given to users on their inquiries and support needs promptly.
- f) Ensure that e-learning platforms are up-to-date by applying software updates and patches, monitor the system's performance, and address any performance issues.
- g) Make sure that regular backups are taken to safeguard data and e-learning content,
- h) Implement security measures to protect user data and the platform from unauthorized access.
- i) In collaboration with the ICT service of the HEI, monitor for any potential security breaches and take appropriate actions to mitigate risks, ensure compliance with data privacy regulations and best practices, and handle copyright and intellectual property concerns related to uploaded content.
- j) Make sure that course content is managed and organized in a way that it is easily accessible to users.
- k) Generate and analyze reports on user engagement, course completion rates, and other relevant metrics on e-learning practices of the HEI to provide insights to administrators and instructors to improve course offerings and user experiences.
- l) Communicate platform updates, changes, and maintenance schedules to users and instructors.
- m) In collaboration with the training officer of the eLMU, provide training and support to instructors and users on how to effectively use the platform.
- n) Conduct regular quality checks on courses and content to ensure they meet the platform's standards, monitor user feedback and make necessary improvements to enhance the user experience.
- o) Make sure that the e-learning platforms and other systems and tools, such as student information systems or third-party applications under the HEI are well integrated in a way that interoperability is ensured with various devices and browsers for a seamless user experience.

5.1.3.6 Roles of the e-Learning Training Officer

The e-Learning Training Officer holds a significant role in facilitating the design, development, and implementation of e-Learning initiatives. The role focuses on providing students, faculty, and staff with effective e-learning experiences that enhance education delivery and support the institution's academic goals. The e-learning Training Officer under the eLMU of a HEI plays a vital role in advancing the institution's e-learning strategies, promoting effective online teaching practices, and supporting both faculty and students in achieving their educational goals through technology-enhanced learning experiences. Some of the roles of the e-Learning Training Officer are to:

- a) Collaborate with faculty members to design and develop engaging e-learning courses that align with the university's curriculum standards.
- b) Ensure that the online courses are accessible, and interactive, and incorporate various instructional strategies to cater to diverse learning styles.
- c) Oversee the university's Learning Management System (LMS), including managing user accounts, course enrollment, and troubleshooting technical issues.
- d) Provide training to faculty and students on how to effectively use the LMS for teaching and learning.
- e) Support faculty through training in transitioning traditional courses to e-learning formats.
- f) Organize workshops and seminars on best practices for e-learning, assessment, and engagement.
- g) Organize and provide foundational digital skills training that plays a vital role in bridging the digital divide and enabling staff and students to participate fully in the digital age.
- h) Provide guidance to students on using the LMS, accessing course materials, participating in online discussions, and submitting assignments.
- i) Address technical issues and ensure a positive e-learning experience for students.
- j) Review and evaluate e-learning content for quality, accuracy, and alignment with educational objectives.
- k) Conduct regular audits to ensure e-learning courses meet accessibility standards and provide a seamless learning experience.
- l) Stay updated on e-learning trends and emerging technologies relevant to higher education.
- m) Organize training sessions and workshops for faculty to enhance their e-learning skills.

- n) Collaborate with academic departments, e-learning coordinators, instructional designers, e-learning studio specialists, and IT teams to develop and deliver high-quality online courses.
 - o) Coordinate with assessment and accreditation teams to ensure compliance with educational standards.
 - p) Analyze data related to student engagement, course completion rates, and assessment results to identify areas for improvement.
 - q) Generate reports on the effectiveness of e-learning initiatives and recommend adjustments based on data-driven insights.
 - r) Conduct research and innovation activities on effective implementation of e-learning in the context of the HEI and beyond.
 - s) Explore innovative e-learning tools, technologies, and pedagogical approaches to enhance the university's e-learning offerings.
 - t) Pilot new methods and gather feedback to continuously improve the e-learning environment.
 - u) Manage the development and launch of new e-learning courses or programs, ensuring that they are delivered on time and meet academic standards.
 - v) Monitor e-learning project milestones and communicate progress to stakeholders.
 - w) Coordinates the training initiatives of the MoE on “Graduate Certificate Training in Instructional Design and Performance Improvement”, “Master Class: Foundation for Excellence in Teaching online” and “Foundational digital skills training”.
- a) The Graduate Certificate Trainer and the Master class Trainer are responsible to:
- i. Developing online courses to support e-learning implementation efforts through management and mentorship of others.
 - ii. Serve as a master trainer to the Ministry of Education in cascading the respective training acquired to other trainees within the University and other Universities.
 - iii. Act as a backstop for instructors to apply digital content development and online class delivery.
 - iv. Work in close collaboration with the University’s management and the e-learning coordinator/director within the university to organize training, collect feedback, and monitor the progress of the training program.
 - v. Closely work with the University/cluster-wide e-learning directors to scale up the training program.

- vi. Actively participate in University-wide digital literacy and awareness creation programs and provide best practices on the adoption and effective use of the e-learning technology.
 - vii. Support the continuous development and review of digital content as per the curricular requirements of programs and the digital content policy/strategy framework applied in the University.
- b) The Foundational digital skills Trainer is responsible to:
- i. Develop and maintain digital skills training materials including training guides, assessments, and observations.
 - ii. Facilitate high-quality and engaging sessions for participants which positively develop their self-confidence and build digital skills.
 - iii. Actively participate in University-wide digital literacy and awareness creation programs and provide best practices on the adoption and effective use of the e-learning technology.

5.1.3.7 Roles of Administrative Assistant

The Administrative Assistant of the eLMU of an HEI plays a crucial role in ensuring the smooth operation of e-learning activities and supporting the faculty, students, and staff involved in online education. The Administrative Assistant of the director of the eLMU also plays a pivotal role in ensuring the efficient and effective delivery of e-learning by providing administrative, technical, and operational support to faculty, students, and staff involved in e-learning activities. The administrative assistant should have relevant experience in management and administration and should be a graduate in relevant fields upon employment and should have at least three years of experience as an administrator. The qualification and experience required for the position of the eLMU's administrative assistant are indicated in Appendix A.

Some of the key roles and responsibilities of an Administrative Assistant in this context are:

- i) Assist in uploading course materials, assignments, and resources to the university's learning management system (LMS),
- ii) Provide support and facilitate communication on matters, and duties related to the eLMU including responding to inquiries from students, faculty, and staff related to e-Learning activities, facilitate communication between instructors and students, including distributing announcements and updates.

- iii) Deal with on scheduling and coordination such as scheduling virtual classes, webinars, and online meetings; coordinate with instructors and participants to ensure smooth conduct of online sessions; help resolve scheduling conflicts and manage changes to the e-learning calendar.
- iv) Maintain accurate records of student enrollment, participation, and performance in e-learning courses; generate reports on e-learning metrics, such as attendance, completion rates, and assessment results; compile data for evaluation and improvement of e-learning initiatives.
- v) Handle administrative tasks such as maintaining records, processing documents, and managing the e-learning unit's resources.
- vi) Assist in budget tracking and procurement related to e-learning initiatives.
- vii) Support the coordination of events, workshops, and seminars related to e-learning.
- viii) Collaborate with IT teams to resolve technical issues related to the LMS and online platforms.

5.1.3.8 Role of ICT Development and Service (IDS) Unit of HEI in Supporting the e-Learning Activities

The ICT Development and Service (IDS) is the division of the HEI that is particularly dealing with supporting and facilitating infrastructure and infostructure for the overall Teaching-Learning and administration processes in the HEI. This division may have different names such as ICT service in different HEIs, but the service it renders is similar. The e-Learning Management Unit should work in close collaboration with the IDS of the HEI.

The ICT Development and Service Unit of the HEI plays a pivotal role in supporting e-Learning activities. The ICT service unit is an essential partner of the eLMU in the successful implementation of e-learning activities within an HEI. The technical expertise, support services, and commitment to maintaining a robust technological ecosystem of the ICT service unit contribute to creating a dynamic and effective e-Learning environment for both educators and learners. As technology becomes increasingly integrated into the education system, the ICT service unit becomes a central hub for ensuring the smooth functioning and effectiveness of e-learning initiatives. Some key roles and responsibilities of the ICT service unit in supporting e-Learning activities in an HEI are:

- a) Provide and manage the technology infrastructure (internet connectivity, hardware, and software) required for the implementation of e-learning in the HEI.
- b) Provide system and database administration support for e-learning platforms and servers and applications.
- c) Establishing and maintaining the technological infrastructure necessary for e-Learning including setting up and managing servers, networks, and internet connectivity to ensure seamless access to online learning platforms and resources.
- d) Oversee the HEI's Learning Management System, the platform that hosts course materials, assignments, quizzes, discussions, and other e-learning content to ensure that the LMS is properly configured, updated, and integrated with other systems.
- e) Provides technical support to both faculty and students using the e-Learning platforms assisting on the issues related to accessing online materials, troubleshooting technical problems, and ensuring a user-friendly experience.
- f) Integrating tools into the e-learning environment, ensuring compatibility, security, and proper functionality.
- g) Assists faculty in uploading and organizing course content on the e-Learning platform including multimedia presentations, lecture videos, reading materials, and interactive elements.
- h) Ensuring the security and privacy of student and faculty data is crucial to protecting sensitive information, including user authentication, data encryption, and compliance with data protection regulations.
- i) Make sure that e-learning materials and platforms are accessible to all students, including those with disabilities through the implementation of features like screen readers, captions for videos, and other accessibility tools.
- j) Offers training sessions and workshops to faculty and students on how to effectively use the e-learning tools and platforms to ensure that everyone can make the most out of the available technology.
- k) Ensures that the e-learning infrastructure can handle increased demand through monitoring server performance, bandwidth, and other factors to maintain a consistent user experience.
- l) Implements backup and disaster recovery plans to safeguard e-learning data in case of technical failures or emergencies to ensure that course materials and student records are not lost.
- m) Update the system with the latest e-learning technologies and trends to exploit opportunities to innovate and enhance the e-learning experience by adopting new tools, features, and teaching methodologies.

- n) Gathers feedback from faculty and students regarding their e-learning experience and uses this feedback to make improvements to the platforms and services offered.
- o) Host e-Learning content on a Tier-3 cloud service so that it can be accessible 24/7.
- p) Deploy a 24/7 student call center support (at least during working hours support until 8:30 PM) or online support /helpdesk such as social media-based support.

The ICT service unit deals with managing the technological infrastructure required for e-learning, managing the Learning Management System (LMS) and other e-learning platforms, providing technical support to faculty and students using e-Learning tools and platforms, ensuring the security of e-learning platforms and data, scaling up the technical infrastructure to accommodate increased demand, managing the backup and recovery schemes, and office keeps up with technological advancements; whereas the eLMU focuses on the pedagogical aspects of e-Learning, assisting faculty in translating traditional course materials into engaging and interactive e-Learning, providing training and professional development to faculty members, ensuring the quality of e-learning content and courses, providing support to students using e-learning platforms, monitoring the effectiveness of e-learning initiatives through feedback, assessment results, and data analytics, and facilitating communication between faculty, students, and other stakeholders involved in e-learning.

5.1.3.9 Academic Standards and Quality Enhancement Office

The Academic Standards and Quality Enhancement Office is the unit of the HEI that is concerned to set standards and improve educational quality in the HEI in general. Among the roles and responsibilities of the Academic Standards and Quality Enhancement Office of the HEI are to:

- a) Monitor the development and the progressive improvement of higher education quality in the HEI including the use of educational technology usage.
- b) Follow up, assist and coordinate the HEI-wide efforts to improve student learning via setting benchmarks of excellence/standards, developing quality audit plans, and quality management and enhancement documents.
- c) Develop digital means of faculty and student evaluation, course offering evaluation including e-learning practices, and data collection instruments.
- d) Create a monitoring mechanism on the proper implementation of all academic programs, including e-learning courses and programs.

- e) Develop guidelines, instruments and measures of internal systems of quality enhancement;
- f) Lead and monitor the development of strategies, policies, and procedures, and direct quality assurance and enhancement.
- g) Coordinate and facilitate the academic review of teaching, learning, research and service.
- h) Monitor the development of and set the standards of e-learning and blended learning in addition to monitoring the traditional way of course delivery.
- i) Forge partnerships with local and international partners, government bodies, and non-government organizations and regulatory bodies in order to mediate its standards, share experience with and further build on the educational quality of the HEI.

5.1.3.10 The Role of Registrar Office in Managing e-Learning Courses and Programs in HEIs

While the Registrar's Office does not handle the technical aspects of e-Learning programs and courses, their role is critical in ensuring that students are properly enrolled, courses are accurately scheduled, and academic policies are upheld within the LMS environment. Coordination between the Registrar's Office and other units, such as the eLMU, CL, and AU Level e-Learning coordinators and the ICT service unit is important for seamless LMS management and student experiences. The Registrar's office:

- a) Manages the process of student e-learning course registration and enrollment like the traditional course enrollment.
- b) Provides accurate and up-to-date class rosters and student lists to faculty members and administrators.
- c) Collaborates with academic departments to schedule courses, including both in-person and online classes.
- d) Manages user access to the LMS based on enrollment data, ensuring that only authorized students are granted access to relevant course materials and resources.
- e) Manages the recording of grades and transcripts.
- f) Ensures that students' academic progress and course completion within the LMS align with their degree requirements.

5.1.3.11 Deans/Directors/Heads of academic institutions in the HEI

The academic management of the HEI such as the deans of colleges/faculties/schools and heads of academic units are responsible for the following tasks within their level of administration. These deans and/or heads are responsible to:

- a) Appoint e-learning coordinators(s) from the academic staff to assist in the implementation of e-learning at their respective levels,
- b) Grant e-Learning coordinators with reduction of teaching load according to the level of work they are dealing with,
- c) Allocate resources for effective implementation of e-learning,
- d) Equip the classrooms with the necessary equipment to encourage the use of the LMS and e-learning in the teaching-learning process, and
- e) Ensure effective implementation of e-learning at their level of studies.

5.1.3.12 Academic Units

Academic units of the HEI are the primary units that own courses and training programs and hence take the responsibility of transforming the way courses and programs should be offered. These units also supports the core academic staff in its subject domain. Academic units are therefore responsible for:

- a) Initiating e-learning and blended learning-based courses and programs for the subjects in their domain,
- b) Transforming courses and curriculums in their subject area to a blended learning practice,
- c) Updating their staff with the modern and state-of-the-art presentation methods,
- d) appointing, if necessary, academic unit level e-Learning coordinators(s) from the academic staff to assist the implementation of e-Learning at their level,
- e) Granting AU e-Learning coordinators with reduction of teaching load according to the level of work they are dealing with,
- f) Allocating resources for effective implementation of e-learning and blended learning,
- g) Equipping their laboratories and classrooms with the necessary equipment to encourage the use of the LMS and e-Learning in the teaching-learning process, and
- h) Ensuring effective implementation of e-Learning at their level of studies.
- i) Determining which new and existing courses should be designed as e-Learning or blended learning courses and when to introduce the e-Learning courses.

5.1.3.13 Academic Staff

Academic staffs of the HEI are responsible to:

- a) Design and develop e-Learning content for their courses,
- b) Upload course description and course materials to the LMS for learners' reference
- c) Sign a declaration form ((see Appendix D for sample declaration statement form) before starting to upload materials in the platform. A copy of the signed declaration form shall be kept in the respective academic unit,
- d) Take full responsibility (validity, copyright) for the materials uploaded to the LMS,
- e) Continuously update and enhance the e-Learning content of their course,
- f) Promote blended learning as much as possible in their courses,
- g) Attend e-Learning training provided by the HEI, depending on the latest development of e-Learning technologies, and
- h) Regulate the use of LMS in their course(s).

5.1.4 The eLMU Office and the e-Learning Studio

e-Learning needs expertise for its design and the development of learning content. Instructors know what content is going to be on their e-learning platform, but they may not have the expertise to produce the actual e-learning modules. Hence, looking for a e-learning experts to digitalize the learning courses becomes a need. Designing content involves the creation of e-learning concepts, producing training videos in modern dynamic audio-visual formats, skills of multimedia production, computer graphics, dynamic presentations, motion design, adoption of local application examples, production and post-production testing, and integrating the training contents into an LMS platform. E-Learning content may also involve the design of e-Learning gamification to make it more attractive. It may require to be designed involving points/badges/levels, quizzes, and puzzles, etc. to boost the effectiveness of learning. This makes the need to establish e-learning studios in HEIs equipped with the necessary tools and employ essential human expertise.

5.1.4.1 Key Professions for the Staff of eLMU Office and the e-Learning Studio

Professions with expertise in the HEIs that are already available include such as subject matter experts, ICT Development and Service staff, and staff from Education or Pedagogy academic units. Some of these could be working across different academic units or in the service units of the HEI. Missing expertise may not necessarily be permanent staff in the HEI and may be acquired on a part-time basis. Where subject matter expertise can be pulled from the relevant academic units, some

professions that are necessary for e-learning course design and development are those that are required in the e-learning studio. The e-learning studio also referred to as a digital studio, is an e-learning content design and development studio. The studio is used to develop professional, pre-recorded educational media content. The studio should incorporate cutting age presentational tools and technologies and instructional technologies. Facilities of an e-Learning studio include a sound-proof room, high-quality video recorder, lighting system, multi-track mixer, teleprompter, creative video and audio editing software, computers, etc. The e-learning studio may be managed by eLMU or by the College’s e-learning coordinator. The studio needs key staff for e-learning content design and development. The professional staff and their required relevant experience that are necessary for e-learning course design and development in the e-learning studio are listed in Appendix A.

5.1.4.2 Salary and Career path of e-Learning Studio Staff

Recognizing the necessity of establishing e-Learning Studios to facilitate the design and development of e-Learning content in HEIs, employing permanent and part-time staff of the studio is critical. Most of the staff of the e-learning studio need to be employed in permanent or contractual form as academic technical assistants of the HEI. The salary and career path of the e-learning studio staff shall be governed by the administrative directive for academic technical assistants for higher education institutions of the Ministry of Education (Directive No. 971/2023).

Though the primary actor for e-learning content development is the instructor of the e-Learning course; suggested job positions, level of education, and initial Salary of e-learning studio staff are:

No.	Job Title	Level of Education	Years of Experience	Civil Service Commission Grade	Initial Salary (Birr)
1.	e-Learning System Administrator	BSc	3	Senor Tech. Asst. Level XII-3	8,017
2.	Administrative Assistant	BA	3	Senor Administrative Asst. Level XII-3	8,017
3.	Animation Designer	BSc	3	Senor Tech. Asst. Level XII-3	8,017
4.	Script Writer	MA	3	Chief Tech. Asst I, Level XIV-3	10,150
5.	Instructional Designer	MA/MSc	3	Chief Tech. Asst I, Level XIV-3	10,150
6.	Visual Designer	BA/BSc	3	Senor Tech. Asst. Level XII-3	8,017
7.	Editor (multimedia content editor)	BA/BSc	3	Senor Tech. Asst. Level XII-3	8,017
8.	Production Engineer	BSc	3	Senor Tech. Asst. Level XII-3	8,017

5.2 E-Learning Content Design, Development and Approval

5.2.1 E-Learning Course Design and Development

Each HEI should avail a dedicated studio for e-learning content development and training staff on e-learning content development. Any e-learning course should be designed and managed in a way that the learner takes into account in terms of course content presentation speed, and that the access to learning support is not constrained. The e-learning content should be sufficient to allow the learner to achieve the learning objective. The following pedagogical principles need to be adopted for an effective e-learning course design.

- a) Subject matter experts (instructors) are the primary actors in the design and development of e-learning courses.
- b) The development of e-content materials is a complex one, involving multiple steps or phases. The HEI shall adopt among instructional design models available such as the ADDIE Model, Waterfall Model, and Rapid Prototyping Model. For example, the ADDIE instructional design model is presented in Appendix B.
- c) e-Learning design and development should follow an international standard to be adopted by the HEI. This significantly contributes to the quality of the online courses/programs and their internationalization. For example, the Quality Matters (QM) course design Rubric standard is presented in Appendix C.
- d) Learning materials should set meaningful goals and work-related tasks that are contextualized to the content that is directly relevant to the learner's practical needs.
- e) Learning technologies used should follow innovative approaches in an evident way.
- f) An e-learning course development should be able to motivate the Learner showing some concrete benefit or interest to the learner in the materials in a way that attracts the learner's attention.
- g) An e-learning course should be developed in a way that it should choose an approach that engages the learners with each other, with the instruction, and with the content, with the entire class.
- h) An e-learning course development should attempt to create a presence that should be strived for in e-Learning environments and that can at least be effective, interactive, and cohesive.

- i) An e-learning course should be developed in a way that the instructor and the students are able to construct and confirm meaning through sustained discussion in a form of inquiry.
- j) An e-learning course must be developed in a way that is internally coherent and consistent with the objectives, the contents, the student activities, and the assessment in a transparent manner.
- k) An e-learning course should be inclusive in its design in that it supports different types and ranges of physical disabilities, social and ethnic groups, and gender.
- l) When designing and developing e-learning course content, designers and developers must consider Web Content Accessibility Guidelines (WCAG)¹² to ensure that the e-content is accessible to all users, including those with disabilities.
- m) An e-learning course should have sufficient and relevant references and links to resources (texts, audio/video, graphics, etc)
- n) An e-Learning course should have an appropriate course introduction for online learning, instructor's support systems, and feedback mechanism.
- o) The respective academic commissions of academic units/colleges shall give accreditation to an e-learning course content design and development.
- p) The respective academic commissions of academic units/colleges shall establish an ad hoc committee of three academic staff to review an e-Learning course material and present its recommendation to the academic commission for final decision.

Any of the following approaches can be followed to develop e-learning content.

- a) In-house content development requires the work of a group of professionals who will form a team to develop e-learning content. The team may include professionals such as subject matter experts, instructional designers, web developers, graphics artists, multimedia developers, and technical support staff.
- b) In instances in-house content developers are not available, outsourcing the content development process to a commercial content developer may be an option.

¹² The Web Content Accessibility Guidelines (WCAG) are a set of internationally recognized guidelines developed by the Web Accessibility Initiative (WAI) of the World Wide Web Consortium (W3C). These guidelines are designed to ensure that web content is accessible to people with disabilities, including those with visual, auditory, motor, cognitive, and other disabilities. WCAG provides a framework for creating web content that is perceivable, operable, understandable, and robust for all users, regardless of their abilities. <https://www.w3.org/WAI/standards-guidelines/wcag/>

- c) The design and development of e-Learning Course content can be expensive for an institution; thus, reuse or adaptation of existing or available Massive Open Online Courses (MOOCs) may be an important consideration.
- d) Make use of appropriate Open Educational Resources (OER) which are freely available on the internet.
- e) Create collaborations to co-create and/or co-utilize e-learning content with other local and international institutions.

5.2.2 e-Learning Course Approval and Cancellation

To approve and cancel e-learning courses, HEIs must follow the same policy and procedure for traditional course approval and cancellation. Note that an e-learning course approval is different from an e-learning program¹³ approval.

- a) Course offerings should be proposed by the academic units or the registrar of the institution.
- b) Course cancellation should be proposed by the academic units and the final decision of whether to cancel the course will be made by the academic unit committee.
- c) Cancellation of courses will finally be communicated to the Registrar's Office.
- d) Admission, registration, and grading procedures shall follow the existing rules and regulations of the HEI.
- e) Course approval and cancellation shall be made by the university senate.
- f) Online modality shall be in place and be integrated into the student information management system (if already available) for course approval and cancellation of a fully online course.

5.2.3 Inclusivity of course contents

The e-learning content development and delivery should consider gender equality as well as consideration of different special needs, and social and ethnic groups.

- a) The e-learning content development and delivery should consider physical disabilities that can be supported by e-learning.

¹³ *An e-learning program is a broader, more comprehensive online learning initiative encompassing multiple e-Learning courses or modules. It is like a curriculum that includes a series of related e-Learning courses that together form a cohesive educational experience. An e-Learning program approval process is more comprehensive than e-Learning course approval. It involves demonstrating that the e-learning program as a whole meets certain educational standards, provides a cohesive and structured learning experience, and delivers consistent quality across all its components. E-Learning program approval pertains to gaining recognition or accreditation for an entire online program as per the provisions of the Senate Legislation of the HEIs or its equivalent and the regulatory body (i.e. Education and Training Authority standards and Guidelines for the same).*

- b) e-Learning content should be created with suitable styles and be available in alternative formats such as file, print, audio, and Braille formats.
- c) E-Learning content developers should take into account the requirements of students with special needs to address their specific needs.
- d) E-Learning course contents design and development should address gender equity (eg. selecting images/illustrations, using gender-implying words).

5.3 E-Learning Pedagogy

Pedagogy as the art of teaching, refers to the techniques, approaches, and types of instruction. The adoption of ICT technologies adds another factor in course design to consider. Successful e-learning and teaching require an understanding of how students learn and communicate with technology. Thus, the use of effective pedagogy is vital for the success of any e-learning implementation. This section provides guidelines on effective e-learning pedagogy and delivery as well as the implementation of blended learning.

5.3.1 Effective e-Learning Course Delivery

The e-learning pedagogy should be aligned to the curriculum through clear objectives, the learner's diversity and learning styles, the relevance of content covered, and the appropriate student activities. The learning objectives of an e-Learning course must be clearly stated in a way that is understandable to the student at the beginning of each chapter, and session. A complete and clear syllabus of the course that is organized coherently and sequentially should be shared with the learner. Any assignments and assessments given to the learner need to be aligned with stated objectives or learning outcomes. Instructor feedback is very important to students and feedback should be provided to students as opportunities for formative assessment. Moreover, instructors should create an active learning environment that facilitates the learner's efforts in acquiring new knowledge through student engagement in which students cooperate with each other in the group and work together through which teamwork can be facilitated and discussions are learner-focused. Course facilitation efforts include moderate discussions, presentation of content in a logical progression, and making content available to students in manageable parts. Instructors should also:

- a) give course assignments and projects that require students to make appropriate and effective use of external resources,
- b) encourage and develop higher-level critical thinking,
- c) engage the learners in a way that must gain and engage their attention,
- d) facilitate learning through interactive, collaborative activities, and

- e) anchor instruction with authentic tasks situated in real-world contexts by creating activities relevant to learners' personal career development.

5.3.2 Class Management

Online class management refers to the way instructors use their skills, tools, and technology to facilitate the organization and administration of classes conducted over the Internet. This can include several activities such as scheduling and organizing classes, tracking attendance, grading assignments, and providing feedback to students.

e-Learning course instructors should:

- a) Post course materials online in advance so learners can plan.
- b) Provide students with clear expectations of the course about online discussion requirements, deadlines, and grading procedures.
- c) Ensure that all learners are 'on board' at the beginning of the course.
- d) Provide clear and concise directions on how to navigate through the course.
- e) Return learner calls/emails quickly to allow learners to progress.
- f) Refer problems to appropriate sources and follow up to ensure resolution.
- g) Have an alternate plan in case the LMS is unavailable.
- h) Make a course backup at the beginning and the end of the semester.
- i) Organize reports on the feedback of learners after course completion.
- j) Assessment of the quality as well as the quantity of the students' online posts and providing on-time feedback.
- k) Provide a schedule for students of upcoming discussion board deadlines.
- l) Provide structure for students to post to threads about what to write.
- m) Manage the share of participation in discussions in a way that all can get the chance to participate.

5.3.3 Implementation of Blended Learning

Programs should encourage blended learning implementation options. The e-learning component of a blended learning course may be implemented by credit hours and student learning time. The e-Learning component of a blended learning course comprises of activities such as lectures, tutorials, project-based assignments, problem-based tasks, and discussion. These can be organized in the form of watching and comprehending instructional videos, playing a learning game, watching and comprehending animations, exercising with purposely designed simulations, reading and reviewing relevant papers participating in forum discussions, responding and posting one's work

with peer evaluation, engaging in self-assessment with online quizzes, dealing with open online certifications on relevant subjects, etc.

The traditional teaching hours or instructional time spent in a specific location (class, lab, etc.) shall not necessarily apply to online instruction where learning takes place anytime, anywhere. Accordingly, credit hours, student learning time, and the number of students per section shall be considered as follows.

- a) The time spent in synchronous live instruction (guided non-face-to-face) is equivalent to face-to-face (F2F) on-location instruction.
- b) A minimum of 2 hours of online (unguided non-face-to-face) instruction is equivalent to 1-hour F2F on location instruction.
- c) Student engagement in the online task (in completing the online task which may or may not be traced by the system) should be seen as equal to physical presence.
- d) To facilitate meaningful student-instructor interactions and promote active engagement, a class size of 20 to 25 students is recommended for courses that involve hands-on practical training or laboratory work, and 40-50 is recommended for lecture-based online courses. This is consistent with the traditional best practice commonly indicated in the academic legislations in HEIs.
- e) As e-learning is not suitable for all types of courses, the department/academic unit that owns the course shall determine which courses can be delivered fully online and which ones require a combination of online and in-person instruction, especially those that involve hands-on practical training or laboratory work.

5.3.4 Online Instructional Interactions and Assessments

Instructional materials should contain meaningful interactions where the interaction focuses on the learner to directly involve in the learning content in a way that allows building confidence that they are learning. Asynchronous student interaction with the teacher or the learning facilitator should be encouraged within a predefined time and period. Interactions that support learner practice should:

- a) Reflect the context of real-world skill application,
- b) Explain what the reason for the interaction is,
- c) Follow a designed elaboration strategy - to build from simple to complex,
- d) Include examples that show where the learning might be applied,
- e) Be designed in a way that allows time for learner reflection and consolidation.

Assessment questions in online instructional interactions should:

- a) Be constructed in such a way that the mechanism for answering questions is straightforward,
- b) Focus on testing knowledge through application to a job-relevant task,
- c) Cover areas on the learning objectives and be on topics that have been previously taught,
- d) Be inclined to a suitable level of difficulty,
- e) Be clearly worded and avoid negative constructions that mislead the learner,
- f) Have clear instructions as to how to answer the questions,

Where questions for assessments are timed, it should be clearly stated at the beginning and an indication of elapsed or remaining time to be displayed in the process. Informative assessment questions, feedback should be specific to the user's answer and should focus on the learning goals, Formative assessment questions should contain information related to the question and the answer to stimulate user recall and comprehension and suggest a further follow-up action to the learner.

5.3.5 Code of Conduct for Online Instructors

To create a positive and productive online learning environment, online instructors shall:

- a) Provide comprehensive syllabi, learning objectives, and grading criteria to guide students' learning journey.
- b) Possess the necessary technical competence to effectively navigate and utilize the e-learning platform and tools.
- c) Communicate clearly and effectively with students, providing timely responses to inquiries and feedback on assignments.
- d) Be accessible to students and establish reasonable expectations for response times.
- e) Treat all students with respect and fairness.
- f) Create an inclusive and supportive learning environment that values diversity.
- g) Promote respectful and inclusive discussions, be aware of cultural sensitivities, and ensure that all students feel welcome and valued.
- h) Design and organize the course materials in a clear, logical, and structured manner.

- i) Uphold copyright laws and intellectual property rights. They should ensure that all course materials, including multimedia, readings, and resources, are properly cited and used with appropriate permissions.
- j) Provide constructive and timely feedback on student work to support their learning and growth.
- k) Design fair and valid assessments that align with the course objectives.
- l) Respect student privacy and confidentiality.

5.3.6 Code of Conduct for Online Students

To create a positive and productive online learning environment, online students shall:

- a) Use technology responsibly during online classes.
- b) Maintain high standards of academic integrity in all their online work.
- c) Attend online classes and complete assignments on time.
- d) Always treat their fellow online classmates and instructors with respect and courtesy.
- e) Actively participate in online discussions, forums, and group activities.
- f) Ensure that their technical equipment, such as their computer, internet connection, and software, are reliable and up to date.
- g) Respect the privacy and confidentiality of their fellow classmates and instructors
- h) Follow proper netiquette guidelines when communicating online.

5.3.7 Assessing e-Learning Activities

Assessing the e-Learning activities could take many forms. In all the cases, the following guidelines could be adopted:

- a) Assessment questions must match the expected learning outcomes.
- b) Assessment methods must be in line with the instruction.
- c) Clear guidelines should be given to students regarding how their work will be assessed.
- d) Various modes and continuous assessments for a course should be planned.

5.3.8 Guideline for Fair Use

Many current copyright laws permit educators the ability to use certain copyrighted works for educational purposes without securing permission or license. Exploiting this opportunity in a fair way and by acknowledging the primary authors is a wise instruction method.

5.3.9 Dealing with Cheating/Plagiarism

Cheating and Plagiarism are the challenges that are nowadays frequent in the teaching-learning process. It is commonly observed that many students attempt to cheat in exams and during report writing regardless of the evaluation methods. Controlling these has become more and more complicated with the explosion in digital resource access and the use of the Internet. HEI should take strict measures to fight this dishonesty and must adopt policies to control cheating and plagiarism. Instructors should adopt some effective methods to encourage academic honesty and discourage plagiarism. Software suitable for plagiarism checkers should be subscribed either centrally by MoE for all institutions or each institution should plan to have it.

5.4 Capacity Development

Continuous development of the digital skills of those engaged in e-learning initiatives is crucial for the success of e-Learning initiatives. More importantly, e-learning instructors, trainers, and content developers require quality professional development to ensure the successful delivery of e-learning. e-Learning instructors must be well trained in online course design and/ or online facilitation; trainers and content developers must be equipped with the latest knowledge and skills in using technology tools to create materials to support e-learning. Policy guidelines for capacity development are listed below.

- a) A clear and structured annual strategic training plan based on HEI's needs and current developments must be formulated and documented.
- b) Training plan must include components to enhance awareness, adoption of e-Learning and instilling a culture of e-learning in HEIs.
- c) Planning of training on e-learning must include both staff and students.
- d) The e-LMU in the HEIs is responsible for scheduling and organizing training sessions, developing relevant e-learning training modules, and managing training for the e-learning instructors and students.
- e) Comprehensive training must be provided on online course design and development, online pedagogy, and instructions on strategies for successful e-Learning.
- f) e-Learning training on pedagogical, technical, and networking dimensions must be provided for the e-Learning instructors.

- g) The e-Learning center or unit in HEIs is responsible to conduct a needs assessment to identify the training needs of teachers in e-learning. This should be done periodically to ensure that teachers are up to date with the latest developments in e-learning.
- h) The e-Learning center or unit in HEIs is responsible to develop a comprehensive e-learning training curriculum/module that covers topics such as instructional design, e-learning technologies, assessment, and evaluation. The curriculum should be aligned with the national e-learning policy and standards. The draft can also be centrally prepared by a team from HLI coordinated by MoE and customized by each university.
- i) e-Learning capacity training must be provided at different stages (Basic, Intermediate, and Advanced) to facilitate a smooth transition in the course of developing the capacity of e-Learning instructors.
- j) A variety of training methods such as face-to-face training, online training, webinars, and workshops can be used to deliver e-learning teacher training.
- k) The effectiveness of e-learning teacher training should be regularly evaluated to ensure that they are meeting their intended outcomes.

5.5 E-Learning Environment

The e-learning environment includes the facilities of ICT technologies such as computers, the Internet, mobile phones, wireless communications devices, networks, broadband and various specialized digital devices, facilities, maintenance capabilities, policies, planning budgeting, e-learning teaching staff and support staff, LMS and other software.

These ICT infrastructures, infostructures, and human resources are the basic needs of every institution to deploy e-learning services. These resources should serve as the basic requirements or environments to launch the guidelines and procedures for e-learning in HEIs. Thus, these requirements should include strategic planning, infrastructures, e-Learning tools, and Learning Management systems should be availed and must be aligned to facilitate e-Learning in attaining the vision of the HEI.

5.5.1 ICT Infrastructure

HEIs should make sure that the needed infrastructures for e-learning are available in an acceptable level before launching e-learning programs. These infrastructures among others consist of facilities, maintenance capability, and adequate budgeting. The HEIs or the Academic units that intend to launch an effective e-learning program should make sure that the following facilities are available. This includes:

- a) The academic unit should assess the status of computing devices among the teachers and students.
- b) Make sure that the necessary software and LMS are available and that they can be made accessible to both the teachers and students.
- c) For creating a good learning environment for online learning sessions, an interactive whiteboard is needed at least in a shared manner with different academic units.
- d) An online learning studio equipped with HD webcams is required for interactive sessions and online presentations.
- e) For the learners to be engaged actively, students need to possess headphones with a built-in microphone. If there is a challenge to have access to such devices, the academic unit should make ready a Lab equipped with such devices.
- f) The ICT service Division of the HEI should consider availing electronic communication tools, including email, discussion boards, chat facilities, and video conferencing tools to the learning community.
- g) Learning activity management systems should be in place to enable the HEI or the Academic Unit to look after the e-learning programs from registration to evaluation.
- h) Provisions in the Institutional ICT Use Policy of the HEI concerning infrastructure use shall apply to the e-learning activities.

In addition to these, HEIs should provide:

- a) An e-content development studio for teachers equipped with the necessary equipment and software including sufficient digital storage and devices with good processing capacity to support multimedia production and back-up.
- b) Acceptable level of internet bandwidth connectivity to teachers and students must be available. There is no exact determination, but the State Educational Technology Directors Association (SETDA)¹⁴ recommends at least 1 Gbps per 1000 students for an external Internet connection to the Internet Service Provider (ISP). From students' side, NetForecast¹⁵ determined that an internet connection supplying 9 Mbps downstream and 5 Mbps upstream is sufficient to support a single student, and 11 Mbps downstream and 5 Mbps upstream is sufficient to support up to three students - assuming no other household internet use such as adults working from home.¹⁶

¹⁴ <https://www.setda.org/>

¹⁵ **NetForecast** is an independent provider of broadband performance and Internet usage accuracy solutions.

¹⁶ https://www.netforecast.com/wp-content/uploads/NFR5141-eLearning-Bandwidth-Requirements.Final_.pdf

- c) Internet connectivity in HEIs should cover all the premises allocated for the learning and teaching activities.
- d) WiFi facilities in lecture hall/ lab/ tutorial rooms should meet the needs of BYOD for teaching and learning.
- e) Facilities such as power socket in the lecture hall/ lab/ tutorial rooms to accommodate the needs of BYOD for teaching and learning, and
- f) Unrestricted access to social media and video streaming (such as YouTube) for the implementation of blended learning, to facilitate the teaching and learning process.

5.5.2 Maintenance

Developing maintenance capability is critical for sustainable and uninterrupted service delivery. HEIs should therefore make sure that the processes for maintenance and administration of the ICT infrastructure in supporting the e-Learning services are effectively organized. HEIs should be able to create comprehensive project management processes to be able to execute their responsibility and to systematically run the e-learning programs. HEIs should allocate resources for maintenance and upgrading of existing facilities and equipment so that it can fit to e-Learning programs.

5.5.3 Budgeting

Adequate budgeting is a critical factor for effective implementation of e-Learning. Thus, HEIs must find sources of financing and should allocate a budget for the procurement of equipment and software to support e-learning, professional development programs, etc. HEIs should make sure that there are monitoring, and evaluation processes in place to justify the required annual budget on the ICT infrastructure with regard to e-learning requirements. HEIs should also have adequate monitoring strategies in place to follow up on the effective utilization of for the intended purpose.

5.5.4 ICT Strategic Planning

The ICT strategic planning of the HEI must be up to date to cope up with the advancement of the technology in e-Learning. The strategic Planning should be aligned with the requirements of the National e-Learning Policy. It also needs to accommodate the requirements of the stakeholders and the national digital education strategy.

5.5.5 Learning Management System and Student Information System Platforms

HEIs should select or adopt a LMS that is grounded in the context of the institution's learning and teaching strategy. The LMS must be part of the HEI's primary Integrated Management System.

- a) HEIs should allow the use of other cloud-based e-learning platforms.
- b) Guidelines of the LMS should be readily available to all teaching and learning communities.
- c) Monitoring/tracking tools on the usage of the LMS must be used to track the status and engagements of the e-learning community.
- d) The LMS monitoring/tracking tools should be able to track the individual activities of the instructor and the learner to help see the level of engagement.
- e) Deployment of the LMS should be evaluated at the academic unit- or program-level and should measure students' learning outcomes.
- f) HEIs should develop rubrics to measure the LMS effectiveness.
- g) HEIs should provide online library services including online journals, online database, e-books, and audio and video materials to be accessed from and integrated into the LMS.
- h) The LMS services should be highly accessible using any devices such as Laptops, Tablets, smartphones, etc. and should be scalable, flexible, and sustainable. HEIs must provide a 24/7 LMS uptime with proper backup all the time.
- i) The e-learning content in the LMS must be available and accessible on the cloud that the HEI is using until a batch completes its learning period (i.e. at least for seven years).
- j) Teaching and learning public domain resources such as selected and relevant free online courses and Massive Open Online Courses (MOOCs) should be made available and be exploited adequately as part of the LMS.
- k) The LMS should support cross-platform to cater for the needs of BYOD so that it can also be accessed on smartphones, tablets, and laptops.
- l) Once the use of LMS becomes a culture, the HEI should work on integrating the LMSs with the relevant Student Information Systems (SIS).
- m) The platform must be flexible to support fully online and/or blended learning.
- n) The LMS and SIS should be integrated to support students' academic and other services including online registration, payment, etc to certification.

5.5.6 Privacy and Data Security

E-learning systems have become a haven for a new breed of illegal activities such as cybercrime as they largely depend on the internet. Hence, the HLI must consider the following e-learning policy guidelines to ensure the privacy and security needs of the e-learning participants.

- a) Make sure that faculty and student data is stored in a secure system.
- b) Ensure the platform users get the necessary training before taking courses.

- c) Utilize a secure protocol (e.g., SSL/TLS) to encrypt data transmission between users and the e-learning platform.
- d) HEI shall put in place a strong user authentication mechanism (strong encryption algorithms) to protect sensitive data, such as passwords, personal information, and assessment results.
- e) Use secure file transfer protocols (e.g., SFTP) when uploading or downloading sensitive data.
- f) Apply role-based access controls to limit privileges based on user roles and responsibilities to restrict access to sensitive data.
- g) Update user account information regularly and disable or remove unnecessary or inactive accounts.
- h) Make sure that any third-party tools or services integrated into the e-learning environment meet all necessary security and privacy standards.
- i) Frequently back up data to prevent data loss.
- j) Acquire consent from faculty and students for collecting, storing, and processing their personal data.
- k) Perform regular security audits to identify and get rid of vulnerabilities in the e-learning systems.
- l) Update e-learning systems and software frequently with the latest security patches and updates.
- m) All users of the platform must agree on privacy agreement forms before joining the main features.
- n) Provisions in the Institutional ICT Use Policy of the HEI concerning privacy and security such as data retention, backup, etc. shall apply to the e-Learning activities.

5.6 Quality Assurance, Monitoring, and Evaluation

Appropriate mechanisms for monitoring e-Learning activities must be in place. Quality assurance, enhancement, monitoring, and evaluation are ongoing processes. The e-Learning policy guidelines in this regard are listed below.

- a) In consultation with the Standards and Quality Assurance office¹⁷ of the HEI, the eLMU shall develop a customized quality assurance and enhancement guideline for e-learning.
- b) In collaboration with the Standards and Quality Assurance office of the HEI, eLMU should conduct self-assessment and evaluation of e-learning practices.
- c) HEIs must provide a review report to MoE to help with status evaluation that will help to identify challenges and to enhance the quality of e-Learning.
- d) The monitoring and evaluation can be conducted by internal and/or external assessors.
- e) A monitoring and evaluation plan should be developed to provide a structured framework for monitoring and evaluating e-learning practices. The plan should identify the indicators to be monitored, the methods of data collection, the frequency of data collection, and the responsible parties.
- f) Data should be collected regularly and systematically to enable effective monitoring and evaluation of e-learning practices. Data can be collected through surveys, interviews, focus groups, observation, and analysis of student performance data.
- g) The feedback and evaluation results should be used to improve e-learning practices. Based on the results, adjustments and improvements can be made to the practices to better align them with the goals and objectives.
- h) Stakeholders should be involved in the monitoring and evaluation of e-learning policies and practices. This will ensure that their perspectives and experiences are incorporated into the evaluation process and that their feedback is used to improve the practices.
- i) Peer review and benchmarking can be used to evaluate the effectiveness of e-learning practices. Comparing the e-learning practices with those of other institutions can provide insights into areas for improvement.
- j) Monitoring and evaluation of e-learning policies and practices should be an ongoing process, with regular assessments and revisions to ensure that they remain relevant and effective.
- k) HEI-level annual e-Learning Day may be organized that may comprise of seminars, workshops, exhibitions, competitions, etc. to share best practices and experiences of e-learning activities within the institution.

¹⁷ The name “Standards and Quality Assurance office” may not be uniform across HEIs. Hence, it represents related names/offices with the role of Quality Assurance and Enhancement in the institution.

5.7 Acculturation

The success and Sustainability of e-learning significantly depend on institutionalizing e-learning initiatives in the HLI. Changing the culture from the traditional face-to-face to the modern e-learning setup demands a planned and continuous effort.

- a) e-Learning Acculturation activities should be coordinated by the eLMU at every HEI.
- b) The eLMU at every HEI should develop an action plan for e-Learning acculturation that includes authority, responsibility, and accountability.
- c) HEI-level annual e-Learning Acculturation activities which may comprise of seminars, workshops, exhibitions, competitions, etc. should be organized to share best practices and experiences of e-Learning Acculturation activities in teaching and learning.
- d) The eLMU must create websites or any online medium (email groups, Facebook, Twitter, Blog) to disseminate the latest information on e-learning technological development.
- e) HEIs should organize awareness programs by creating promotional items such as banners, bunting, logos, short films, booklets, etc.
- f) An e-Learning Acculturation Day dedicated to e-Learning acculturation activities should be organized at the HEI level which may be co-organized with the e-Learning Day.
- g) Key Performance Indicators (KPI) must be set for the e-learning acculturation-related activities and must be included as part of the annual performance appraisal.
- h) HEIs must allocate a specific budget from tuition fees for the e-Learning acculturation program.
- i) The eLMU at the CHEI level should be responsible for strengthening the implementation of e-Learning Acculturation activities in collaboration with the college- and academic unit-level coordinators.

5.8 Intellectual Property and Copyrights

Proper management of intellectual property and copyrights is crucial for the success of eLearning initiatives. The intellectual property and copyright issues of the e-learning course contents developed by instructors should be governed by the HEI's policy on intellectual property. In addition, the HEIs should:

- a) secure ownership over e-learning content created by their faculty members provided that the institution avails institutional resources for the e-learning content development and incentivize the same.

- b) encourage e-learning course material developers to secure permission from copyright holders (see Appendix E for sample request form) when using copyrighted materials. In cases where copyright holders ask for compensation, the academic unit shall facilitate the same.
- c) periodically orient e-learning course material developers with intellectual property and copyright laws (eg. at the beginning of every academic calendar year.).
- d) support and encourage faculty members to utilize open educational resources (OER).
- e) encourage e-learning resource sharing among faculty members to promote a culture of openness and innovation in e-learning.
- f) verify that all content (text, images, videos, audio, etc.) used in the e-learning course is either original, properly licensed, or falls under fair use.
- g) ensure that the course content promotes diversity and inclusion, avoiding any discriminatory or offensive materials.

5.9 Incentives

Incentivizing the e-learning initiatives is one of the necessities to promote e-learning in the HEIs. Incentives and recognition can help as a pull factor to motivate staff to get engaged in content development, online delivery, and e-learning professional development programs. Policy guidelines concerning recognition of work in e-Learning content development and giving incentives to e-Learning course content developers are listed below.

- a) Incentives to the academic staff of public HEIs for the e-learning course content they developed shall be governed by the academic unit they belong to and by the college academic commissions.
- b) After the e-Learning content is evaluated by the academic unit, and is then approved by the college academic commission, a one-time incentive should be given to the content developer(s).
- c) The incentive given for teachers for developing the e-learning course content shall be in terms of the weight and character of the overall content of the electronic education.
- d) Once the e-learning course content developer receives a remuneration for the e-learning content he/she developed from the host HEI, the copyright of the content will go to the HEI. The HEI can then authorize other staff members of the same HEI to use it when assigned to offer the course within the same institution.

- e) E-Learning content may be shared for free or with payments for use to other HEIs. If an e-Learning course material is shared with another HEI with payment, a one-time compensation shall be made by the benefiting HEI based on the rate agreed between the two HEIs. Out of the money earned, 50% will be given to the HEI, 40% will be to the original course developer, and 10% will be to the e-Learning studio (where the e-Learning course content is developed).
- f) HEIs must recognize e-learning-based course offerings as equivalent to teaching the same course in traditional class-based course offerings in terms of load and instructor's teaching time.
- g) HEIs must acknowledge e-learning content developments of its staff through certificates of merit, awards, letters of appreciation, etc.
- h) HEIs must prepare awards and recognition programs that acknowledge and reward outstanding e-learning initiatives and innovative e-learning content designs. These programs can cover a range of categories, such as best e-learning course content, best e-learning program, and best innovative e-learning methods used.
- i) HEIs should organize professional development training opportunities for e-learning course developers to enhance their skills and expertise.
- j) e-learning course content development and blended course offering activities of staff shall be recognized as contributions to the academic staff of the HEI similar to academic management activity in academic promotion.
- k) Academic staff with e-learning course content development initiatives should be supported by the e-learning Studio of the HEI and/or the College.
- l) HEIs must provide funding opportunities for e-learning content development initiatives. These can be in the form of seed funding for new initiatives, funding for scaling up successful initiatives, or funding for research and development in e-learning.

6. Implementation

The e-learning teaching-learning method implemented in the institute is to complement the traditional face-to-face classroom method in addition to establishing stand-alone e-learning programs based on the requirement. From the practice of pedagogy, the most favored method of teaching and learning is a hybrid or blended approach.

As highlighted in the National e-Learning Policy, the teaching and learning at any HEI in the country must be delivered through a blended-learning approach. To comply with this policy guideline, the use of appropriate LMS in the HEI is therefore compulsory.

6.1 The e-Learning Management Commission

An HEI-level e-learning management commission that is chaired by the eLMU director shall be established to monitor the development of e-learning in the HEI and to set the specific policy and objectives of e-Learning in the institute. The commission will also devise short- and long-term plans to fulfill its objectives and to cater for the future expansion of e-learning in terms of infrastructure, software, management, and security. The commission consists of the Director of ICT services, representatives of e-learning coordinators at different levels, the Director of the Continuing Education program, the Dean of Pedagogy/Education relevant Department of the institute, and relevant Deans/Directors. The commission should meet at least twice per academic semester to evaluate the progress and solve outstanding challenges in the process of the e-learning implementation.

6.2 Levels of implementation

The implementation of e-learning can be designed into phases based on the strategic planning of the institute and the National e-Learning Policy. The periods of the phases can be set by the e-learning management commission. Each phase has to be planned in a way that can progressively address the issues of Infrastructure and Infostructure, Governance, e-learning Pedagogy, e-content development, professional development of staff, and Enculturation.

6.3 Standards

To ensure that the e-learning implementation in the HEI fulfills its objectives, the materials uploaded into the LMS must be current and in line with the standards set by the institute.

6.4 Staff and Learner Access

All staff and registered learners of the HEI are automatically given access to the LMS. The LMS should be designed in a way that can be accessed on and off-campus using the same user ID and password assigned by the course program and the ICT service unit.

7. Policy Guideline Review

This institutional e-Learning policy guideline shall be reviewed from time to time to ensure that it remains relevant to changing national and international demands in the provision of Higher education programs.

Appendix A: Key Professions for the Staff of eLMU Office and the e-Learning Studio

Some professions and their required relevant experience that are necessary for e-Learning course design and development are stated below.

e-Learning System Administrator

- BSc degree in Computer Science or related fields;
- Certificate in system administration from an accredited institution or 3 years of experience in system administration;
- Skill or certifications in Learning Management Systems, web design, and database administration;

e-Learning Administrative Assistant.

- BA degree in Management or Business Administration or related fields;
- 3 years of experience in communications, and secretarial work;
- Proven experience in management service, or related field;
- Skill or certifications in managerial work;

Animation Designer

- BSc/BA degree in Computer Animation or Computer Science related fields;
- Certificate in computer animation design from an accredited institution or 3 years of experience in computer animation design work;
- Proven experience in communications, digital video production, broadcasting service, or related field;
- Skill or certifications in illustration, modeling, visual effects, or technical art;
- Strong storyboarding skills is a plus;

Script Writer

- MA degree in any field of education, better to subject-specific;
- A minimum five years of experience in teaching/training field;
- Three years of proven editorial skills of script writing;

Instructional Designer

- Master's degree in instructional design or educational design;
- Teaching or training background beneficial;
- Proven experience in developing objectives, rewriting, reshaping contents and developing assessments;

- Having experience in excellent web design, writing, communication, and collaboration skills’
- Creating and testing multimedia content, and
- Developing entire courses and curriculum.

Visual Designer

- BSc degree in motion graphic designing or in Computer Science with certification in motion designing;
- At least 3 years of relevant motion graphics and animation work experience;
- Having experience in delivering creative motion graphics, animation and some traditional graphic solutions in the past, and having a proven evidence with a well-curated portfolio of work;
- Experience or certificate in designing and animating 2D and 3D motion graphics;
- Provide aesthetic 3D renders and animation (primarily shading, lighting, animating, and rendering, with some modeling);

Editor (Media Editor)

- BSC Degree in film studies, cinematography/ video editing or other related fields;
- Proven work experience as a video editor;
- Three years of solid experience with digital technology and editing software packages (Avid Media Composer, Light works, Premiere, After Effects and Final Cut)
- Demonstrable video editing ability with a strong portfolio;
- Familiarity with special effects, 3D and compositing;

Production Engineer

- BSC degree in recording arts and management;
- Having a strong technical background experience in operating studio equipment;
- Basic knowledge of integrating contents with desired technology;
- Three years of proven experience working in digital media.

Subject matter experts

- The Academic units are the primary sources of subject matter experts.

Appendix B: ADDIE Instructional Design Model

i. Analysis Phase

- a) Needs Assessment - to identify the goals for an instructional project. In doing so, we are trying to identify the gap between the desired goals and the current status.
- b) Audience analysis - helps us tailor the instruction to specific types of learners.
- c) Content Analysis – defining the critical attributes of the given subject matter and also identifying whether any content exists that can be used whole, in part, or with modifications.
- d) Technical Analysis (course delivery and authoring tools) - to define upfront what the minimum requirements will be to participate in the course or training.

ii. Design Phase

- a) Identify Goals - goals assist in the creation of objectives and tell instructors what learners need to know, understand, or apply.
- b) Write learning objectives - objectives should describe the learner’s expected level of performance by the end of the course.
- c) Identify entry behaviors- it is crucial to assess entry behaviors and to set appropriate prerequisites.
- d) Devise an instructional strategy - it is necessary to devise an appropriate instructional strategy to maximize learning effectiveness.
- e) Create flowchart and storyboard - the flowchart and storyboard should include major course components such as a main menu, modules, lessons, quizzes/tests, and any other elements used in the course.

iii. Development Phase

- a) Authoring - start authoring the content.
- b) Media creation/integration / production - create a variety of media content that will support the objectives of each lesson.
- c) Prototyping - while all the previous phases should contribute to the effectiveness of the instruction, it is wise to test a prototype before full development.

iv. Implementation Phase

- a) The processes for this phase **SHOULD** vary based on the size of the user, the complexity of the e-content, and the distribution of the materials.

v. Evaluation Phase

- a) First phase of evaluation (formative) – should look for ways to maximize development of future projects, or to enhance the current one.
- b) Second phase of evaluation (summative) - feedback from the user is analyzed to determine how well the implementation phase went.

Appendix C: Quality Matters Course Design Rubric Standard (6th edition)

The Quality Matters course design Rubric standard is intended for use with courses that are delivered fully online or have a significant online component (hybrid and blended courses). Course Designers can use the Rubric to aid in the creation of courses designed to meet Standards from the outset. The Rubric is also used to assess the level to which a course meets Standards and highlight areas for improvement. A score of **85%** qualifies a course to receive a QM Certification for quality course design.¹⁸

1. Course Overview and Introduction	
Specific Review Standards	Points
1.1. Instructions make clear how to get started and where to find various course components.	3
1.2. Learners are introduced to the purpose and structure of the course.	3
1.3. Communication expectations for online discussions, email, and other forms of interaction are clearly stated.	2
1.4. Course and institutional policies with which the learner is expected to comply are clearly stated within the course, or a link to current policies is provided.	2
1.5. Minimum technology requirements for the course are clearly stated, and information on how to obtain the technologies is provided.	2
1.6. Computer skills and digital information literacy skills expected of the learner are clearly stated.	1
1.7. Expectations for prerequisite knowledge in the discipline and/or any required competencies are clearly stated.	1
1.8. The self-introduction by the instructor is professional and is available online.	1
1.9. Learners are asked to introduce themselves to the class.	1
2. Learning Objectives (Competencies)	
Specific Review Standards	Points
2.1. The course learning objectives, or course/program competencies, describe outcomes that are measurable.	3
2.2. The module/unit-level learning objectives or competencies describe outcomes that are measurable and consistent with the course-level objectives or competencies.	3
2.3. Learning objectives or competencies are stated clearly, are written from the learner’s perspective, and are prominently located in the course.	3

¹⁸ <https://www.qualitymatters.org/qa-resources/rubric-standards/higher-ed-rubric>

2.4. The relationship between learning objectives or competencies and learning activities is clearly stated.	3
2.5. The learning objectives or competencies are suited to the level of the course.	3
3. Assessment and Measurement	
Specific Review Standards	Points
3.1. The assessments measure the achievement of the stated learning objectives or competencies.	3
3.2. The course grading policy is stated clearly at the beginning of the course.	3
3.3. Specific and descriptive criteria are provided for the evaluation of learners' work, and their connection to the course grading policy is clearly explained.	3
3.4. The assessments used are sequenced, varied, and suited to the level of the course.	2
3.5. The course provides learners with multiple opportunities to track their learning progress with timely feedback.	2
4. Instructional Materials	
Specific Review Standards	Points
4.1. The instructional materials contribute to the achievement of the stated learning objectives or competencies.	3
4.2. The relationship between the use of instructional materials in the course and completing learning activities is clearly explained.	3
4.3. The course models the academic integrity expected of learners by providing both source references and permissions for the use of instructional materials.	2
4.4. The instructional materials represent up-to-date theory and practice in the discipline.	2
4.5. A variety of instructional materials is used in the course.	2
5. Learner Activities and Learner Interaction	
Specific Review Standards	Points
5.1. The learning activities promote the achievement of the stated learning objectives or competencies.	3
5.2. Learning activities provide opportunities for interaction that support active learning.	3
5.3. The instructor's plan for interacting with learners during the course is clearly stated.	3
5.4. The requirements for learner interaction are clearly stated.	2

6. Course Technology	
Specific Review Standards	Points
6.1. The tools used in the course support the learning objectives or competencies.	3
6.2. Course tools promote learner engagement and active learning.	3
6.3. A variety of technology is used in the course.	1
6.4. The course provides learners with information on protecting their data and privacy.	1
7. Learner Support	
Specific Review Standards	Points
7.1. The course instructions articulate or link to a clear description of the technical support offered and how to obtain it.	3
7.2. Course instructions articulate or link to the institution’s accessibility policies and services.	3
7.3. Course instructions articulate or link to the institution’s academic support services and resources that can help learners succeed in the course.	3
7.4. Course instructions articulate or link to the institution’s student services and resources that can help learners succeed.	1
8. Accessibility and Usability	
Specific Review Standards	Points
8.1. Course navigation facilitates ease of use.	3
8.2. The course design facilitates readability.	3
8.3. The course provides accessible text and images in files, documents, LMS pages, and web pages to meet the needs of diverse learners.	3
8.4. The course provides alternative means of access to multimedia content in formats that meet the needs of diverse learners.	2
8.5. Course multimedia facilitate ease of use	2
8.6. Vendor accessibility statements are provided for all technologies required in the course.	2

Appendix D: Declaration Statement to Upload Electronic Course Material to the LMS

Declaration Statement for Uploading Electronic Course Material

I, **[Your Name]**, hereby declare that I am the rightful owner or have obtained the necessary permissions to upload the electronic course material for the **[Course Title]** to the Learning Management System at **[Institution Name]**.

I affirm that the uploaded content complies with all applicable copyright laws and intellectual property rights. Any third-party materials included in this course material have been appropriately credited and licensed, as necessary.

I understand and agree that by uploading this course material, I grant **[Institution Name]** and its authorized personnel the right to manage, distribute, and share the content within the context of the designated course on the Learning Management System. I also acknowledge that students enrolled in the course will have access to the uploaded material for educational purposes only.

Furthermore, I accept responsibility for regularly reviewing and updating the course material as needed, ensuring its accuracy, relevance, and compliance with the institutional policies and guidelines.

I acknowledge that any unauthorized distribution or use of this course material outside the intended educational context is strictly prohibited and may result in disciplinary action as per the institution's policies.

Date of Declaration: _____

Your Full Name: _____ Signature: _____

Contact Email Address: _____ Contact Phone Number: _____

By signing this declaration, I affirm that the information provided is accurate and complete to the best of my knowledge.

Approved by: _____ Position: _____ Date: _____

Appendix E: Sample Copyright Permissions Request Letter

Sample copyright permissions Request letter

- A description of who you are: _____
- Your institution and academic unit: _____
- An accurate but brief identification of the copyright-protected material in question:

- How you will use the content: _____
- Where you will use the content (e.g., in online course materials, in a seminar, etc.):

- For how long you will use the content: _____
- Date of Request: _____
- Your Full Name: _____ Signature: _____
- Contact Email Address: _____ Contact Phone Number: _____

If you are sending the permissions request by mail, ask the rights holder to print the email, sign it and return a scanned copy to you.

In case the rights holder requests payment for the use of the work, you can consult your academic unit to facilitate the same.

Glossary¹⁹

Learning: acquisition of knowledge, skills, or attitudes

Training: development of skills and/or understanding through procedurally defined *learning activities* focused on a specific application.

Web-based learning: *online learning* that uses web and internet-based technologies.

Online learning: *learning* enabled via connection to an *IT system*.

Blended learning: a combination of *online learning* with face-to-face or *offline learning*.

Computer-based learning: use of information processing systems as *learning tools*.

Learner: an *entity* that learns

Teacher: an *entity* that teaches

Note: Within a specific context (e.g., collaborative learning) the same person can play the roles of *learner* and teacher.

Open university: a university that offers a distance learning

Learning Management System (LMS): a software system designed for the purpose of performing administrative and technical support processes associated with *e-learning*.

Learning environment: physical or virtual environment in support of a *learner*.

Instructional design: systematic and systemic instructional planning including needs assessment, design, evaluation, implementation, and maintenance of materials and programs

Learning resource: an *entity* that can be referenced and used for *learning*, education, and *training*.

Digital resource (DR): any type of *resource* that can be transmitted over and/or accessed via an *information technology system*.

Note: A digital resource can be referenced via an unambiguous and stable identifier in a recognized identification system (e.g. ISBN, ISAN, UPC/EAN, URI).

Intellectual content: recorded information of a *digital resource* independent of its representation and/or access mode.

e-Learning: *learning* facilitated by information and communications technology

Offline learning: *learning* independent of connection to an *IT system*.

Synchronous learning: refers to a real-time learning experience where students and instructors are engaged in learning activities simultaneously, just as they would be in a traditional classroom setting. This type of learning often involves live lectures, video conferencing, webinars, or virtual classrooms.

Asynchronous learning: allows students to access learning materials and complete assignments at their own pace, without the need for simultaneous participation. This approach provides more flexibility and can be well-suited for those with varying schedules.

¹⁹ Source: "INTERNATIONAL STANDARD (ISO/IEC 2382-36), Third edition, 2019-06; Information technology-Vocabulary, Part 36: Learning, education and training"

