A Framework for Open and Distance Learning (ODL) in Pakistan

PAK-UK Education Gateway

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Contents

1. Introduction

This report is part of the ‘distance learning and new ways of higher education’ theme of the PAK-UK Education Gateway program.

PAK-UK Education Gateway program is a joint initiative of the British Council in Pakistan and Higher Education Commission (HEC) Pakistan which aims to enhance the partnership between the higher education sectors of Pakistan and the United Kingdom.

Key areas of collaboration under this umbrella framework are innovation, impactful and collaborative research; higher education leadership; quality assurance and standard-setting; distance learning and new ways of higher education; international mobility; transnational education; citizenship education and community engagement ; COVID-19 rapid grant for universities.

Pak-UK Education Gateway builds on existing collaborations between the UK and Pakistan that the British Council and Higher Education Commission has facilitated over the past fifteen years: from knowledge exchange and leadership development programs to student and teacher training, scholarships and research collaborations

2. Context and Background

Currently, the fifth most populous country in the world with ~220 million people, Pakistan is characterised by one of the highest population growth rates worldwide outside Africa. The country's population is estimated to reach 403 million by 2050 (UN median range projection). There are more young people in Pakistan today than at any point in its history, and it has one of the world's largest youth populations with 64 percent of Pakistanis now under the age of 30.

Due to the age demographics of Pakistan, there is a need and demand for affordable and quality education at all levels. This includes technical, vocational, and tertiary as well as higher education.

The Higher Education Commission of Pakistan (HEC) was established in 2002. One of the objectives of HEC was to contribute to the socio-economic development of Pakistan through the provision of quality higher education. This objective was further substantiated by the announcement of the United Nations' Sustainable Development Goals (SDGs) in 2015 with all goals having implications for higher education as a driver of the socio-economic progress

In 2016, a new vision for education 2030 was presented recognising the important role of education as the main driver of development and other proposed SDGs. This new vision is fully captured by SDG 4 "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all".

For the past 18 years, HEC has contributed to considerable expansion of HEIs with the number of public and private universities increasing from 59 in 2002 to 214 in 2020, supporting an increase in annual enrolment from ~0.28 million to ~4.8 million students. However, there is still a huge demand and supply gap between the education sector capacity to deliver quality higher education and the number of students in need.

Inclusion and equity, in and through education, is the cornerstone of a transformative education agenda. Therefore, there is a need to address all forms of exclusion and marginalisation, disparities and inequalities in access, participation, and learning outcomes. Ensuring inclusion and equity for the youth around the country has been quite challenging due to the number of HEIs, the size of their infrastructure and their geographical locations. Allama Iqbal Open University (AIOU) and Virtual University of Pakistan (VU) have been instrumental in providing much needed learning support through open and distance learning. However, the demand for quality higher education remains unfulfilled.

The spread of Corona Virus Disease (COVID-19) during the early months of 2020 forced all education providers in Pakistan to shift to online and distance learning. To assist HEIs, HEC has released policy guidance notes with the two-fold objective of protecting the health and safety of the HEI community and the continuation of teaching and learning using a variety of distance learning approaches.

Many HEIs that have started distance learning through online classes are at various stages of 'online readiness' in terms of infrastructure, technology, capacity, experience and content. Although policy guidance note 5 'HEC COVID-19 Guidance note 5 – online readiness' addresses several quality-related issues, a more comprehensive policy on open and distance learning for Pakistani HEIsIs needed.

In addition to safeguarding student interest under the COVID-19 situation, we consider that a new policy should be developed to address the wider objectives of enhancing reach, standardising educational experience, introducing flexibility without compromising on rigour and quality of learning, and assessment.

This report has been written to suggest a framework for developing an ODL policy by the HEC or individual HEIs to address the above-mentioned issues.

3. Purpose and Objectives

This report has been written to suggest a framework for developing an ODL policy by the HEC or individual HEIs to address the above-mentioned issues.

Considering the demographic circumstances of Pakistan, an ideal ODL policy should aim to enhance access to quality education for those who are unable to learn through conventional face-to-face and campus-based modes of learning. ODL provides equal opportunity to large segments of the population, especially those who either have challenges to access an HEI campus or have conflicting work and family commitments.

Another fundamental objective of an ODL policy for Pakistani HEIs is to offer flexibility to advanced learners without compromising their work-life balance. There should be greater emphasis on flexibility in terms of the period of registration and admission criteria based on minimum academic prerequisites as opposed to setting quotas or merits.

An HEI should be able to deliver learning resources and conduct rigorous, secure, and effective assessments irrespective of a student's location. Careful consideration, however, is needed to maintain the academic value of an ODL program therefore tutor to student ratios, tutor workload and tutor turnover must be addressed and governed.

The greatest challenge whilst addressing reach, inclusivity and flexibility is the program cost and student affordability. One can argue that a program delivered to masses has its benefits of scale in that, the programs can be made quite affordable. However, a student-centric program of academic value and recognition is not inexpensive to develop. Instructional design and delivery through intra-HEI collaboration, shared resources, faculty, and expertise make an ODL program not only of great academic value but equally flexible and affordable.

Student experience should be the centre of any ODL policy. An ideal policy should contain well-established principles of learning design for ODL programs paying due consideration to differentiated student experience online as opposed to a face-to-face setup. This includes providing a variety of purposeful, comprehensive, and interactive content with user-friendly access to support distance learning pedagogy.

Because a ense of community is important the policy should also address issues like engagement, student support, feedback, complaint management and support for mental health and well-being. There should be clear guidelines on online learning communities for students with emphasis on support, rather than on regulation.

Programs will have greater acceptability if their academic value is maintained irrespective of the mode of delivery. Any program delivered using ODL must carry the same quality standard and academic value as those awarded by HEIs to graduates who have studied conventionally on-campus. The policy should provide considerable focus on the rigour, security, and quality of assessments. If an HEI can achieve excellent student experience and academic value through ODL, then the recognition of this mode of learning delivery will follow. Therefore, the policy should cater to a robust structure of governance and accountability for ODL program approval, monitoring, and quality assurance.

Measures to differentiate between a high and poor quality ODL program are crucial. It is equally important that the quality of an ODL program is comparable to similar programs being offered by another HEI. Therefore, standardisation in terms of technology, design, governance, and student experience should be a critical consideration for a national ODL policy.

4. Scope

The new ODL policy should provide a framework and guidelines for HEIs looking to offer a complete or part of an academic program carrying course credits, as well as programs that do not carry credits. However, HEC will need to appropriately scope the application of such a policy within the higher education sector.

At a more granular level and based on nature, type, need and effectiveness of a program, HEIs should have the flexibility to adopt more than one type of delivery and decide the proportion of learning to be delivered through ODL, provided they comply with the HEC ODL policy.

Finally, the Policy should address issues about degree offerings by international universities independently, through academic collaborations, as well as joint degrees developed and/ or delivered in collaboration between local and international universities.

5. Digital Inclusion

According to Building Digital Communities: A Framework for Action, digital inclusion is the ability of individuals and groups to access and use information and communication technologies. It is a combination of access, understanding, connectivity and ability to use Information and Communication Technology (ICT). Absence of one or more of the above is considered as digital poverty.

Digital poverty at a national level is not restricted to access, understanding, connectivity and ability to use ICT on part of the student only but also on part of the faculty, HEI and the Government. For example; power supply, a conducive learning environment or study space, reliable hardware and its repair & maintenance, a faculty trained in digital teaching, etc.

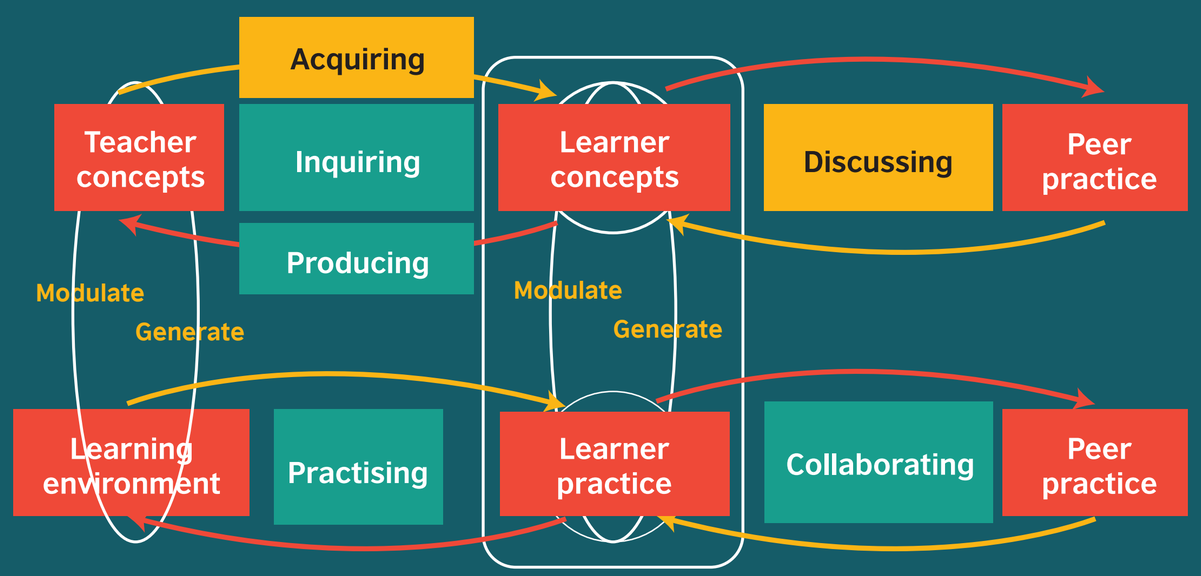
The challenge of access to quality higher education cannot be met without addressing the digital poverty challenge simultaneously. At the national policy level, recommendations should be made for tried and tested technologies, software, and methodologies as part of the standardisation agenda. Also, an effective ODL policy should account for digital inclusion by offering offline solutions and flexibility to segments of learning community impacted by digital poverty.

It is suggested that HEC's National Academy for Higher Education (NAHE) should develop tutor training programs around the use of ICT, content creation, and effective design and delivery of programs through ODL.

Similarly, the Information Technology (IT) department at HEC should carry out detailed research on available technologies and software and may also look for in-house development of Learning Management Systems (LMS) and Virtual Learning Environments (VLE) to roll them out to all HEIs in the country.

6. ODL Types and Techniques

Professor Diana Laurillard of UCL Institute of Education categorises learning into 6 types i.e. learning through Acquisition (i.e. to read/watch/listen), Collaboration, Discussion, Investigation, Practice, and Production, from the theory-based Conversational Framework, where each type of learning activity is a cycle between learner and teacher, or learner and peers, at the concept and/or practise level.



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An ideal ODL program should consider all six types of effective learning, which can be sufficiently covered using the following ODL types and techniques. HEIs should be given complete flexibility to adopt any one or more type or technique of ODL, depending upon itsneed and effectiveness for the program.

1. Live-online

Live-online are synchronous events, organised in a live virtual classroom where students and tutors meet to interact and communicate with audio, video and content. It is also referred to as real-time online classes or a live video and content streaming. Live-online technology incorporates registration and access control, therefore, it is also sometimes termed as synchronous online delivery.

Since the lectures are delivered online, these are supported by a pre-announced schedule and may also require pre-reading, attendance monitoring, and student attention to the screen being displayed. The content of a live-online program may be shared using any of the following tools:

a. Capturing a manual whiteboard on camera
b. Smartboard integrated with live streaming
c. Computer screen sharing/ desktop sharing
d. PowerPoint and other presentation tools
e. PDF and other annotation applications
f. Webinars, podcasts, interviews, etc.

E-learning

E-learning is self-paced learning which is also referred to as online learning or electronic learning. E-learning is usually delivered asynchronously where students learn on their own time without the real-time instructor. The course content, lessons, pre-recorded lectures, tests, quizzes, homework and assignments can be accessed by the student at any time. Some e-learning courses may additionally include live-online classes, virtual meetings, or face-to-face interaction as part of the course activities. Therefore, there is a potential to offer e-learning in a synchronous mode as well.

A typical e-learning program may comprise of the following content:

g. Pre-recorded lecture videos
h. Mandatory reading (articles, reports, blogs, guides, journals, whitepapers, etc.)
i. An electronic copy of a textbook (e-book)
j. PowerPoint presentations
k. Charts, graphs, infographics, checklists, etc.
l. Case studies, illustrations, etc.

Interactive Online Learning

Interactive Online learning is a pre-designed, automated and tutor-less electronic learning environment that requires a student to actively participate in learning through a computer by performing various reciprocal electronic tasks. Within an interactive online learning environment, a student interacts with the content to perform tasks, solves problems and evaluates arguments to achieve carefully set learning outcomes.

An interactive online learning program may includeany of the following learning types:

m. Scenarios and simulations

n. Quizzes and surveys

o. Interactive assessments

p. Character dialogue and role plays

q. Games & problem solving

r. E-book with built-in interactive content

Blended Learning

Blended learning is a style of education which combines face-to-face learning with distance education.

In a blended learning model, the distance learning part may be delivered using correspondence, e-learning or interactive online learning whilst, the face-to-face part using conventional classroom or live-online lectures.

The face-to-face part is usually supported by a pre-announced lecture schedule whereas, in the distance learning part students learn on their own without a real-time tutor. Blended learning is best delivered using a synchronous learning management system that combines face-to-face with distance learning.

A mix of live-online and e-learning may also be classified as blended learning. However, for the purpose and scope of this document, blended learning includes a combination of face-to-face classroom learning and distance learning.

Open Learning

Open learning is a form of knowledge delivery using, easy to access, open educational resources, correspondence, technologies, and learning communities. It is usually a learning activity based on independent study rather than formal classroom instruction that allows students the flexibility to choose from a variety of options regarding the learning schedule, location, pedagogical method, modes of access (online or offline) and other factors related to the learning processes.

Open learning cannot be restricted to specific types. However, the following most used types have been considered for this document

s. Massive Open Online Courses (MOOCs)

t. Correspondence education

u. Home and independent study

v. Continuing education/ Continuing Professional Development (CPD)

w. Vocational and professional trainings

x. Self-paced adult education

Modes of ODL delivery

A learning eco-system comprises of activities and tasks associated with learning delivery as well as governance, administration, finance and support. Students in an ODL environment are distinctly located, therefore, synchronisation between learning and support systems is necessary.

Depending on the extent of deployment, HEC may advise HEIs to adopt Learning Management Systems (LMS) synchronised with administration and finance.

HEIs may be allowed to offer their open and distance learning programs using a synchronous system that integrates various types of ODL as well as with CMS, LMS, assessments, ERP, digital marketing and social media platforms.

HEIs may also be allowed to adopt an asynchronous system that works independently of other ODL types and systems in use whilst, retaining the base-line synchronisation.

HEIs should have the flexibility to decide the extent of customisation for their various systems based on their capacity, academic, oversight and governance needs.

Learning Management System (LMS)

A learning management system is a software/ application that is designed to offer online education. An LMS may also provide various support functions including administration, documentation, content creation, content distribution, tracking, reporting, broadcasting, assessments, and feedback.

LMS features vary based on specific needs, the number of users and ODL mode. Some LMS offer a degree of customisation to help HEIs synchronise them with other HEI systems.

Deployment of an effective LMS should be an integral part of an ODL policy. There are distinct advantages in adopting an LMS, including the organisation of learning content in one central location to avoid the risk of losing important data, easy administration, remote creation of content in predefined templates, packaging of various pieces of content to develop a new program or modify an existing one, access control, analytics, insights, and real-time compliance with various internal and external policies.

The ODL policy should suggest deployment of a synchronous LMS supporting various types and techniques of learning delivery as well as addressing the six learning types.

Clear guidelines should be provided for HEIs to integrate the LMS with other systems including CMS, FMS, ERP, digital marketing and social media platforms.

For standardisation, HEC Pakistan should suggest an appropriate LMS. However, the following three options are generally available for acquiring an LMS

- A managed open-source solution with customisation.
- An off-the-shelf solution.
- Building their own.

Features of the Learning Management System

Commonly available learning management systems offer the following features and functionalities;

1. Access controls with job hierarchies, authentication, and security.

2. Ability to customise learning delivery in line with academic compliance set for the program.

3. Authoring tools for content and assessment creation with a variety of upload options.

4. Option to white-label and customise branding, layout, fields, functionality, and reporting.

5. Digital library to host HEIs self-developed content and any reference material.

6. Storyboarding and lesson planning tools.

7. Program management tools for registrar enrolments, creating batches, allocating tutors, monitoring attendance & attention, capturing feedback & complaints and administrative reporting.
8. Built-in video conferencing tools with recording capabilities for tutor-lead live-online classes.
9. Live delivery tools like mute participants, live polls, chatbox, question box, survey, hand raise and prompts.
10. Digital canvas to present real-time content including documents, presentations, and graphics.
11. Password enabled student portal with a user interface containing personal details, course subscription, learning content, lesson plan, academic calendar, student handbook, fees and dues, feedback and complaints and disciplinary procedures.
12. Content management tools for assigning, sharing, editing, and archiving with ability to download learning content, study support resources, lecture recordings and academic calendars, etc. for offline learning.
13. Ability to access learning content and live-online using a variety of devices including mobile phones.
14. Data collection, management, integration, and backup along with cybersecurity.
15. E-commerce platform for student fee collection along with transaction security and option to synchronise with FMS and ERP.
16. Communication and notification integrated with reminders and calendar prompts.
17. Course catalogue with the option to subscribe to an open course or submit an application for a regulated program.
18. Document management both for the registrar office as well as for assignments and other submissions.
19. Exam engine to deliver objective test and constructed response exams with self-marking facility for objective questions.
20. Exam marking and coursework grading feature with reporting capabilities.
21. Skills and competency assessment through integrated simulations and exercises.

22. Social networking, learning and discussion tools with the options to create learning communities, discussion boards and blogs, etc.

23. Student performance tracking and credit-earning integrated with examination and attendance features.

24. Option to offer blended learning by integrating live-online and e-learning.

25. Ability to issue completion certificates, transcripts, and degrees.

26. Ability to deliver Massive Open Online Courses (MOOCs).

10. Components of an ODL Policy

The open and distance learning policy should ideally provide a quality assurance framework and set of guidance tools on all aspects of an ODL learning eco-system including course design & development, a learning outcome & competency framework, program management, a learning management system, knowledge bank/ library, laboratory & practicals, assessment & examination, progression & award, accreditation & recognition and, equivalence & attestation.

The following section provides suggestions for an effective ODL policy however, based on individual circumstances of each HEI and their online readiness, the policy components may be customised appropriately.

10.1. Course design and development

ODL programs should be purpose-built keeping in view student needs and academic value. An effective learning design is important to justify equivalence with a conventional face-to-face program and to impart a degree of confidence by society and employers.

The following section includes guidelines on ODL course design and development

10.1.1. Academic Governance

- All ODL programs offered by an HEI should follow the same academic governance rules, policies, and guidelines as set for the conventional face-to-face program.

- Any new program being offered through ODL should be subject to approval from the academic boards or similar governing bodies within the HEI.

- HEI should appoint a program lead for each ODL program being offered.

- Change to an existing face-to-face program to blended, online or distance learning should require approval from governing bodies within the HEI.

- HEI should ideally establish a centre for ODL delivery or appoint a technical advisor/ member to the academic board to assist and guide in technological aspects of ODL course design, development, and delivery.

- Governing bodies should meet periodically to review the performance of the ODL program along with data analytics to make necessary changes for improving the quality of the program.

10.1.2. Learning Content and Library (Online and Offline)

- HEI should be required to develop a variety of comprehensive study material and online learning resources designed for active learning and suitable for the type of ODL delivery being adopted for the program to support distance learning pedagogy.

- HEI should produce an instructional video, a student handbook, or a study guide to familiarise students with various aspects of the ODL program.

- Learning content should be aligned with course objectives, learning outcomes, scheme of study, competencies and skills being developed.

- ODL program content must account for unconventional nature of delivery therefore it should be interactive, enabling, progressive, transformational, and engaging.

- To maintain flexibility, the content should be broken down into smaller learning objectives feeding into a comprehensive course plan and scheme of study.

- HEI should develop a central content repository or digital library for students to access remotely.

- HEI should provide online access to the content database which may contain suggested reading material including books, journal, articles, case studies, research papers, etc.

- For a live-online program, HEI should produce shareable and displayable content including presentations, quizzes, polls, surveys, etc. to closely align the delivery with conventional mode.

- Content for e-learning and/ or interactive program should go through a careful, end-user focused, instructional design and delivered through an online platform.

- E-learning should be designed and developed using a learning management system with an electronic scheme of study using a variety of methods including lecture videos, e-books, presentations, illustrations, etc.

- HEI should develop or acquire impactful and interactive simulations and/ or case studies for an ODL program requiring mandatory practical/ laboratory. Alternatively, such programs will need to follow a blended learning model with set contact hours.

- HEI should develop separate content for programs requiring experiential learning with mandatory practical experience and/ or laboratory work.

- HEI should develop separate content for the face-to-face element of a blended learning program in line with existing guidelines.

- Content for open learning program should be developed in line with guidelines above and the type of learning delivery being used.

- Since the learning content will be accessible to a wider learning community, HEI should be encouraged to take copyright and intellectual property protection measures for any self-developed content

10.1.3. Learning Support Resources

- Access to suitable library services and resources is important for achieving bigger academic objectives. HEI should therefore produce a set of learning support resources considering the need of a distant learner.

- Resources should include but not be limited to suggested readings, open-source videos, net surfing and browsing certain websites, etc.

- HEI should collate all relevant learning support resources in a resource bank or provide hyperlinks in the electronic lecture plan.

- HEI should provide specimen/ mock exams within the resource bank along with suggested solutions and marking guides.

- HEI should provide a dedicated portal for students to ask questions and request additional tutorial support.

- HEI should ensure that all applicable intellectual property and copyright regulations are strictly adhered to, when using, sharing, or suggesting third-party content/ resources in their ODL program.

- HEI should ensure that any outdated content or support resource is archived and labelled accordingly in the resource bank.

10.1.3. Learning Support Resources

- All ODL programs offered by an HEI should follow the same curriculum and credit scheme as set for the conventional face-to-face program.

- Credit hours of an ODL program should be distributed amongst all types of learning delivery methods including live-online, face-to-face, e-learning, workshops, access to recorded lectures, self-assessment, interactive online learning, examination, projects, peer-review, mandatory reading, simulations, laboratory experience and practicals.

- The lesson plan should include details of contact hours with a tutor along with its schedule as well as details of any self-paced learning.

- HEI should create a lesson plan for each ODL program according to the type and mode of delivery offering flexibility and greater scope than a pure classroom learning program.

- ODL programs should have the same course objectives and learning outcomes as a conventional program.

- Credit hours of an ODL program should be distributed among all types of learning delivery methods including; live-online, face-to-face, workshops, access to video lectures, self-assessments, examinations, projects, peer-reviews, mandatory reading, simulations, laboratory experience and practicals, etc.

- All lesson plans should be subject to the same level of governance and academic compliance as a conventional program.

- The lesson plans should include details of contact hours with a tutor along with its schedule as well as details of self-paced learning.

- Lesson plan of an ODL program should be automated and available to students electronically with embedded hyperlinks to learning content.

- Where possible, lesson plans should be designed to embed them in a learning management system.

- HEI should have complete flexibility to design a program with any proportion of online, offline, recorded, and live content.

- The lesson plan should offer flexibility to use alternative modes of learning in case a particular medium is unavailable (e.g. recording of the lecture if live-online is not accessible or live-online if face-to-face is not possible).

- HEI should provide required infrastructure and technology for developing an ODL program for regular and contingency offering.
- HEI should ensure that each lesson plan has a built-in feedback mechanism for students to provide their response to all aspects of the ODL program being subscribed.

10.1. Course design and development

Competency framework comprises of a set of academic and professional capabilities that include related knowledge, skills, abilities, behaviours and characteristics leading to successful and optimum performance.

The knowledge part is usually covered within the learning objectives of a program however, guidance is needed for the skills and behaviour related attributes if a program is delivered through ODL. It is therefore important that a considerable amount of focus is placed on suggesting competency framework rather than just the learning outcomes. Below guidelines can support HEC in shaping the national policy from a competency-based learning approach.

- HEI should develop a competency framework for each of their programs on offer irrespective of its mode of delivery.
- Competency framework should include core technical/ educational competencies as well as non-technical/ generic competencies.
- Technical competencies should be aligned at an appropriate level on bloom's taxonomy and further categorised into knowledge, application, skills, fieldwork, research and practical experience whilst generic competencies should include a broad understanding of general principles of civilisation including ethics, professionalism, financial & computer literacy, etc.
- When a program is offered through ODL, HEI should produce a scheme of study that includes a necessary focus on developing skills and behaviours in line with the competency framework for that program.
- HEI should test the skills in addition to the knowledge and application using a variety of assessment tools fit for the level of studies in line with bloom's taxonomy.
- Separate scores should be assigned for demonstrating skills and behaviours within the program and its assessment.

10.3. Professional Councils

Several professional accreditation councils have been established by HEC and other governing bodies to ensure the quality of the programs offered at an institutional level. Professional councils carry out accreditation of institutions including their departments, facilities, and disciplines by giving them appropriate ratings.

- All professional councils that provide accreditation for a program being offered at HEI should develop ODL delivery guidelines for their respective professional programs.

- HEIs should be required to comply with policies and guidelines issued by respective professional councils if they are looking to offer a professional or specialised qualification through ODL.

- In case of a conflict between the guidelines issued by a professional council for an ODL program and the national ODL policy then, the guidelines by the national ODL policy should supersede.

10.4. Program Management

10.4.1. Admission and registration

- HEI should provide flexibility in terms of the period of registration and admission criteria based on minimum academic prerequisites as opposed to setting quotas or merits.

- The focus of entry requirements of an ODL program should be to recruit students meeting minimum requirements with diverse entry routes to deliver quality learning to achieve the same outcome as for the conventional face-to-face program.

- HEI should publicise entry requirements, registration periods and admission process of an ODL program clearly on their website.

- HEI should enable online submission of admission application along with the facility to upload relevant academic and personal documents.

- HEI should ensure that electronic responses are sent to an applicant throughout the admission process.

- HEI should issue electronic joining instructions to successful applicants upon their enrolment.

10.4.2. Student Data

- HEI must ensure complete security of the student data held on their filing system.

- HEI should introduce electronic data banks & file servers and all data held by the HEI both electronic and paper-based should be digitised and older records should be securely archived.

- HEI should be encouraged to synchronise their student data with a Learning Management System (LMS), Financial Management System (FMS), Campus Management System (CMS) or Enterprise Resource Planning (ERP) system.

- HEI should ensure that all personal sensitive data is stored on HEI's central database only and no such data is saved on independent computers/ personal devices.

- HEI should introduce reliable cybersecurity systems to ensure the protection of student data from cyber-attacks.

- HEI should design and implement access controls to their filing system by defining access rights.

- HEI should ensure the electronic transfer of data is authorised and encrypted.

- HEI should include data protection and disciplinary procedures within their employee handbook and staff contracts.

- HEI should provide sufficient backup of electronic data through secured remote servers.

10.4.3. Student Identification

- HEI should issue a unique identification number/ enrolment/ roll number to each student signing up for an ODL program.

- HEI should differentiate students by assigning a different series or characters of the identification number based on the mode of delivery.

- HEI should ensure that a student identification system is in place for online and interactive programs.

- Student identification checks and real-time proctoring should be made mandatory if assessments are conducted remotely or online.

- HEI should ensure student access to learning content is timebound and restricted as per their subscription and signup.

- To protect student identity and the course content, HEI should ensure that the access is password protected and enabled on a single screen at any given time.

10.4.4. Attendance and Attention

- HEI should ensure that attendance on an ODL program is monitored regularly in compliance with program regulations and credit scheme.

- Attendance should include attending live-online and face-to-face lectures, workshops, accessing video lectures and tools to measure the time required for mandatory readings.

- HEI should use such technologies for live-online that capture student attendance as well as attention on the screen being displayed.

- Attendance deficit on a live-online program should be supplemented by attentively watching a recorded video of the live online lecture.

- HEI should time-bound access to recorded content to maintain discipline.

- HEI should ensure that e-learning and simulations are designed to cater to the attendance and attention element of the ODL program.

- HEI should retain attendance and attention data on student file for any future need.

10.4.5. Student-Centred Approach

- HEI should ensure that the student remains at the centre of an ODL program design, development, and delivery.

- HEI should ensure that any complex software installations by students are supported with step-by-step guides and technical support helplines.

- HEI should adopt a student journey/ customer experience perspective for all formats, layouts and templates including on-screen navigation, colour-schemes, fonts and sitemap.

- HEI should build a parallel student support function and helpline to ensure uninterrupted delivery of an ODL program.

- HEI should facilitate extra tutorial support through the provision of a dedicated mailbox and helpline for students with course-related queries.

- HEI should ensure that technology and design used for ODL program caters for the needs of students with disabilities.

- HEI should provide each registered student with a password enabled student portal containing personal details, course subscription, learning content, lesson plan, academic calendar, student handbook, fees and dues, feedback and complaints and disciplinary procedures.

10.4.6. Student Feedback/ Reflection

- HEI should introduce a feedback system for all aspects of the ODL program.

- Student feedback should be collated at program and batch level periodically throughout the duration of the program.

- HEI should keep a record of individual student feedback against their record as well as for the batch and program.

- HEI should share student feedback scores when marketing the program to prospective students.

- Student feedback statistics should be used for academic governance, performance appraisals and modification of the ODL program.

- For continuous quality enhancement, HEI should be required to set student satisfaction targets for faculty, admin & support, and monitor performance against these targets periodically.

10.4.7. Student Complaints & Appeals

- HEI should provide a complaints & appeals portal for students attending/ participating in an ODL program.

- The complaints & appeals portal should be backed by the published complaint & appeal policy of the HEI along with the procedure.

- A student should only be allowed to file complaints & make appeals against a decision using their student portal.

- The complaint form should be automated and provide the student with an option to classify the complaint as urgent.

- The complaint form should contain various fields to identify the area of concern so that the enquiry reaches the right official for necessary actions.
- HEI should establish a complaints committee comprising of relevant stakeholders to access and respond to the complaints.
- HEI should retain complaint records and identify any trends to take corrective measures for quality enhancement.

10.5. Student Submissions

- HEI should ensure that all student submissions are uniquely identifiable with an audit trail existing against each student from submission to evaluation and grading.
- HEI should assign dedicated mailboxes or email addresses to designated authorised officials for receiving dissertations, assignments, projects, and thesis.
- Any deadlines, formats, content, guidelines, and submission protocols should be shared with students in the student handbook and joining instructions.
- Students should be allowed to upload their dissertations, assignments, projects, and thesis through student portal on the HEI LMS via secure login or via registered email ID to a dedicated mailbox adhering to clear identification protocols.
- HEI should ensure that each submission is assessed on the automated plagiarism tools like Turnitin before evaluation and grading.
- HEI should develop a separate plagiarism policy for online submissions of dissertations, assignments, projects, and thesis.
- Designated authorised officials should circulate student submissions to internal and external evaluators for review and comments electronically using HEI LMS, dedicated mailbox or email address.
- Graded and marked submissions should be returned to the student electronically through HEI LMS or dedicated mailbox to the registered email ID of the student.
- HEI should ensure that the LMS and email communication system complies with HEI's confidentiality policies and appropriate security measures are in place to safeguard against any misuse, breach of privacy, unauthorised leakage of submissions, evaluation reports and other documents.

10.6. Experiential Learning

Experiential learning is a process of exposing students to practical experience either within a laboratory, classroom, community, or workplace to increase knowledge, clarify concepts, develop skills and behaviours.

The types of experiential learning within an academic environment include laboratory work, practicals, internships, industry visits, research projects, fieldwork, simulations, gaming, and role-playing.

- HEI should ensure that required direct supervision of the tutor is available for all ODL programs requiring experiential learning.

- HEI should make use of off-the-shelf and bespoke simulations or games to supplement experiential learning.

- Simulations or games should be embedded within the course structure and lesson plan of each program.

- HEI should be allowed to execute experiential learning through simulations or games individually for each student, in small groups or collectively through live-online mode.

- For programs where practical instruction is not possible through simulations, HEI should use the blended learning model to facilitate laboratory and practicals.

- Credits score for mandatory experiential learning should be clearly articulated in the credit scheme of the ODL program.

- HEI should allow students to complete internships through remote working forums including Business Process Outsourcing (BPO), freelancing, etc.

- HEI should be encouraged to expose students to internships and short-term employment with assigned credit score for mandatory experiential learning as long as it is in line with the competency framework for the program.

- For programs requiring industry visits, HEI should be encouraged to use virtual tours or videos to supplement experiential learning. To ensure usefulness and effectiveness, HEI should produce short questionnaires, checklists, and quizzes at the end of the virtual tour or video to test the understanding.

- Programs requiring experiential learning through roleplays should be supplemented by interactive learning or video conferencing.

- HEI should designate authorised officials to conduct thesis defence of PhD, MPhil and MS students and final juries of undergraduate programs through live-online platform ensuring appropriate student identification and authentication checks.

- To ensure the open public defence of dissertations, thesis and projects, HEI should host an open recorded webinar, invite interested participants to join live and contribute according to the code of conduct prescribed by HEI.

- HEI should use the polling option to capture the digital signature of the defence committee to certify the result of defence.

10.7. Evaluation, Assessment and Examination

Assessment and examination are an integral part of the teaching process to assure the wider community of the competence of the student in the field of study appropriate for that level.

The imperatives for evaluation and assessment for ODL are different from the conventional mode of delivery. HEIs need robust, automated, secured, and integrated assessment systems to support students on ODL programs.

10.7.1. Assessment Approach

- HEI should develop explicit policy on ODL evaluation, assessment and examination and make it available to all stakeholders.

- Assessment approach for each program should require sign-off from the governing bodies within the HEI.

- HEI should ensure that the assessment approach for an ODL program justifies the competence required for the category on bloom's taxonomy.

- HEI should use a combination of viable assessment options for the type of ODL program to meet the required standard of readiness.

- Assessments for the ODL program should remain consistent and in compliance with the semester examination policy of the HEI.

- HEI should deploy multiple forms of evaluations and assessments including proctored examinations, assignments, quizzes, presentations, in-class activities, self-assessments, peer-reviews, and non-proctored examination.

- HEI should design examinations to test the application of knowledge rather than recalling memorised information considering their remote nature.

- HEI should ensure that there is no difference in the assessment method between students registered on the same ODL program.

- To maintain and enforce academic honestly, HEI should ensure that required precautions are in place to safeguard examination submissions against plagiarism and unpermitted collaboration.

- HEI should ensure that a grievance mechanism is in place to deal with any complaints about exam functionality, marking or technology malfunction.

- HEI should create an exception policy for students lacking connectivity by offering an alternative offline assessment suitable to the program and student situation without compromising on rigour and quality.

- HEI should develop an exam contingency policy for alternative assessment of the ODL program where the primary assessment method cannot be carried out.

10.7.1. Assessment Approach

Assessments for an ODL program can be broadly categorised as either ‘formal/ summative’ or ‘informal/ formative’. The formative assessment generally provides tutors with the ability to gauge their students’ comprehension of learning content and study support resources whilst, the summative assessment provides a systematic way to measure student progress and assign scores.

10.7.2.a. Types of Formal/ Summative Assessment

a.1. Computer-Based Examination

Computer-based examination can be tested using ‘objective’ or ‘subjective’ type questions. Objective type questions are those that require a specific correct answer with no option to provide a new or different opinion whilst the subjective type are constructed response questions that require answers in the form of explanation, calculations, charts, graphs, diagrams, etc.

- HEI should have the option to proportionally create examinations using both, objective and subjective type questions for wider and more rigorous testing.

- HEI should use this type of assessment to test knowledge and application in line with the category on bloom’s taxonomy.

- HEI should use LMS to automate delivery for both types of computer-based examinations.

- HEI should ensure that examination timeline and duration policies are incorporated within the LMS delivering computer-based examination through subjective testing.

- Objective type questions may be auto-marked on LMS whilst subjective type questions should be marked using expert-markers.

- Any expert marking should be executed online using annotations or scoring areas.

- HEI should ensure that there is a sizeable question bank for computer-based examination available for more robust and fair testing.

- HEI should ensure that the question banks of computer-based examinations are refreshed periodically.

- Objective type examinations should contain a variety of question types including multiple-choice, fill-in-the-blank, true-false, drag-drop, matching, hot-areas, decision tree, etc.

- Subjective type examinations should contain a variety of response types including, word processing, spreadsheet, presentation, and on-screen annotations with an easy option to insert symbols, diagrams, charts and graphs for Science, Technology, Engineering, Mathematics (STEM) programs.

- HEI should produce an equal mix of easy, moderate, and difficult questions.

- HEI should ensure that the online examination has a built-in statistical system to present each student with a different set of questions with a fair mix of various difficulty levels.

- HEI should ensure that the computer-based examination provides fair coverage of the syllabus for all students despite different questions.

- HEI should ensure that each student receives a fair mix of descriptive and calculation-based questions.

- HEI should ensure that each student receives a fair mix of objective questions testing knowledge, comprehension, application, and evaluation based on the level of the program.

- HEI should ensure that examination timeline and duration policies are incorporated within the LMS delivering computer-based examination through objective testing.

- HEI should ensure that each exam submitted has a tracking mechanism and audit trail to link it back to the student, program, and course plan.

a.2. Offline Written Examination

Offline written examinations for an ODL program are usually open-book examinations where the examination is delivered through an exchange of email with limited or no proctoring. Therefore, these examinations are designed to test the application of knowledge with special precautions to safeguard against plagiarism and unpermitted collaboration.

- HEI should ensure that each offline examination submission is uniquely identifiable, and an audit trail exists against each student from submission to evaluation and grading.

- HEI should assign dedicated mailboxes or email addresses to designated authorised officials for receiving offline examination.

- Any deadlines, formats, content, guidelines, and submission protocols should be shared with students in the student handbook and joining instructions.

- Students should be allowed to upload their offline examination through student portal on the HEI LMS via secure login or via registered email ID to a dedicated mailbox adhering to clear identification protocols.

- HEI should ensure that each submission is assessed on the automated plagiarism tools such as Turnitin before evaluation and grading.

- Designated authorised officials should circulate student offline examination to expert markers for marking electronically using HEI LMS, dedicated mailbox or email address.

a.3. Research Paper

HEI may choose to require students to write a research paper on specific areas covered in the course, normally involving original research using materials other than prescribed in the course. Student submissions suggestions mentioned above should apply to using research papers as a mode of assessment.

a.4. Literature Review

Some HEIs require students to prepare an annotated bibliography, anthology or literature review on an assigned/ approved problem or topic. Students are sometimes required to read the work, evaluate them and their usefulness to the topic and provide an explanatory evaluative paragraph for each work in their words and a comparison of the viewpoints. Student submissions suggestions mentioned above should apply to using literature review as a mode of assessment.

a.5. Report Writing

HEI may choose to require students to write a report, memo, or article to address an intended audience. This method allows an opportunity to synthesise and apply course knowledge and skills. Student submission suggestions mentioned above should apply to using report writing as a mode of assessment.

a.6. Reflection Paper

HEI may choose to require students to write a reflection paper that discusses their perspective and intellectual path during the course. This provides an insight into their understanding and involvement in the course. Student submissions suggestions mentioned above should apply to using reflection papers as a mode of assessment.

b. Types of Informal/ Formative Assessment

b.1. Online Quizzes, Tests, Surveys and Polls

Some HEIs use online quizzes, tests, surveys, and polls as modes of assessment. Quizzes should be conducted online using LMS or open-source quiz and survey applications. HEI should use these as part of the overall course assessment bearing credits and grades.

b.1. Online Quizzes, Tests, Surveys and Polls

Some HEIs choose oral examination and interview as a mode of assessment. Oral examination and interview should be conducted using a live-online platform with set timetable and duration.

HEI should ensure that all oral examinations and interviews are recorded and tagged to the respective student using LMS. HEI should also ensure that a bank of questions comprising of easy, moderate and difficult questions is developed in advance and a fair mix of these are asked at the oral examination or interview.

b.3. Live Presentation

Some HEIs require students to deliver presentation over a live-online platform as part of the assessment of student competence. HEI should ensure that sufficient guidance is available to students for using the platform and delivering presentations efficiently.

Presentation schedule should be announced in advance along with formats, duration and details of the content. HEI should have the option to club live presentation with an oral examination and interview to assess a student's deeper understanding of the content being presented.

Students who do not have electronic presentation applications on their ICT device should be allowed oral presentation without a slide deck. HEI should ensure that all live presentations and any oral questions are recorded and tagged to the respective student using LMS.

b.4. Recorded Presentation

Some HEIs require students to submit a recorded presentation through the student portal or dedicated mailbox through registered email address as part of the assessment of student's competence. Student submissions suggestions mentioned above should apply to using the recorded presentation as a mode of assessment.

HEI should invite student for a mandatory oral examination and interview in case of recorded presentation to authenticate the submission for plagiarism and unpermitted collaboration.

b.5. Self-Assessment

Some HEIs require students to self-assess their submission or examination against a grading criterion or marking scheme. HEI should arrange for randomly selected assessments to be re-evaluated or marked by experts for audit and compliance reasons.

Students should be given temporary access to the marking portal to self-assess their submissions or enter the single final grade in a specified tab. Self-assessment may also be conducted using a manual offline function.

b.6. Peer-Review and Evaluation

Some HEIs require students to evaluate submissions or examinations of their peers against a grading criterion or marking scheme. HEI should arrange for randomly selected assessments to be re-evaluated or marked by experts for audit and compliance reasons.

Students should be given temporary access to the marking portal to peer-mark submissions or enter the single final grade in a specified tab.

b.7. Simulations

HEIs should be allowed to use online simulations to assess students for ODL programs requiring experiential learning. HEI should develop or acquire holistic simulations covering large parts of syllabus or break them down into smaller learning objectives.

Simulations should have carefully embedded scoring and grading criteria for the demonstration of knowledge, application, and skills. HEI should ideally club simulations with oral examination and interview to assess a student's deeper understanding of the learning content.

10.7.3. Assessment Security

- HEI should ensure that sufficient security measures are in place to safeguard question banks, examinations and any questionnaires being used.

- For computer-based examinations, screen mirroring, screen capturing and screen recording tools and applications should be disabled.

- Students should only be able to access examinations after identification and authentication checks using password-protected examination portal.

- HEI should ensure that examinations being sent to students for offline attempts follow carefully set examination delivery policy.

- HEI should ensure a tight turn-around period for offline attempts and a huge question bank to minimise risks of examination leakage.

- Sufficient cybersecurity measures should be kept in place to safeguard against any cyberattacks on question banks, student submissions, and grades.

- HEI should ensure that there a grievance mechanism is in place to deal with any exam security and secrecy violations.

10.7.4. Invigilation

- HEI should be allowed to invigilate/ proctor computer-based examination using remote invigilation technology.

- Remote invigilation should include an online supervisor who is connected with the candidate by live-streaming, remote screen sharing and instant messaging.

- HEI should ensure that if examinations are conducted using remote invigilation, the entire examination and its invigilation is recorded for later review by the examination department.

- HEI should ensure that the student is registered for the examination and authentication checks are carried out.

- HEI should ensure that final security checks are conducted with pre-defined protocols and guidelines before the examination begins.

- HEI should ensure that the student is physically located in a risk-free environment without any access to sources of information that are not permitted.

- HEI should ensure that supervision of examination is carried out throughout the duration of the examination to ensure that there is no infringement of the rules.

- HEI should establish guidelines for reporting any issues that arise during the examination including technical issues and suspicious behaviour by the student.

- HEI should ensure real-time saving of student submission to avoid any loss in case of technical problems.

- HEI should ensure that students taking the examination are trained through mock examination to familiarise them with examination functionality and remote invigilation.

- HEI should ensure that once the examination is submitted for marking, students are unable to retrieve the examination.

10.7.5. Marking, Feedback and Performance Reporting

- HEI should ensure that an online marking and feedback system is available through LMS.

- HEI should be encouraged to introduce an on-screen marking application or develop guidelines for manual marking and uploading scripts and results.

- HEI should keep an electronic record of all examination results for individual students and batches for each ODL program being offered.

- HEI should ensure that examination setters and markers are well-versed with the technology being used for online examination.

- HEI should ensure that examination results are delivered securely to students electronically using the student portal.

- Existing examination and result review policy should apply to online examinations.

10.7.6. Statistics

- HEI should collect useful insights from programs being offered through ODL. These should include statistics on student application for admission, merits, rejections, acceptances, participation and attendance, examination performance, pass rates, feedback scores, complaints, awards, and alumni, etc.

- HEI should use the data and statistics for reforms and quality assurance purposes.

- HEI should ensure the confidentiality and security of data and statistics collected for their ODL programs.

- HEI should be encouraged to use their statistics for the marketing of their ODL programs.

10.7.7. Plagiarism

HEI should develop a separate plagiarism policy for computer-based examinations and online submissions of dissertations, assignments, projects, and thesis. HEI should also ensure that each submission and examination is assessed on the automated plagiarism tools before evaluation and grading.

10.7.8. Performance Record

- HEI should maintain a record of student performance in formal and informal assessments for future referencing and handle any grievances.

- Performance records should be made available for any departmental investigations as well as for any attestation requests from students.

- All records should be kept in secure remote servers with regular backups.

- HEI should design and implement access controls to their performance records by defining access rights.

10.8. Progression and Award

10.8.1. Credit Scoring

- All ODL programs offered by an HEI should follow the same curriculum and credit scheme as set for the conventional face-to-face program.

- HEIs should comply with all applicable policies and guidelines issued by HEC for program design, curriculum, scheme of study, credit scheme, etc.

- The credit score of an ODL program should be distributed amongst all types of learning delivery methods including live-online, face-to-face, e-learning, workshops, access to recorded lectures, self-assessment, interactive online learning, examination, projects, peer-review, mandatory reading, simulations, laboratory and practicals.

- HEI should develop a mechanism of credit transfer between ODL and conventional program.

- HEI should develop a mechanism to recognise course credits from international ODL provider(s).

10.8.2. Transcripts, Certificates and Degrees

- HEI should be given an option to issue electronic transcripts and certificates however, the degree should only be issued on HEI's approved stationary with a seal and signature of the issuing authority.

- An automatic electronic signature may be added to electronic transcripts and certificates.

- HEI should be encouraged to develop a graduate directory and offer an online portal for verification and attestation of students' transcripts, certificates, and degrees.

- HEI should ensure that appropriate cybersecurity and data protection measures are in place to safeguard electronic transcripts and certificates from misuse.

- Students should be allowed to download and print their electronic transcripts and certificates using their student portal.

10.9. Accreditation, Recognition, Equivalence & Attestation

- HEI should be required to comply with existing policies on program accreditation, their equivalence on National Qualification Framework (NQF) and attestation of any certificates, transcripts, and degrees.

- HEI looking to offer their entire portfolio through ODL, should not be required to comply with campus accreditation policies. Such policies should be replaced with compliance with the national ODL policy.

- Quality Enhancement Cell (QEC) at HEI should adopt audit and evaluation mechanism for ODL programs and generate reports in accordance with HEC guidelines for renewal.

11. Capacity Building of HEI & Faculty

HEI should ensure that relevant faculty development programs and hands-on trainings are available for various aspects of ODL program including course design, content development, live-online delivery, technology, assessment, marking and program administration.

HEI should also enable faculty to collaborate externally to source learning content and simulations to support ODL delivery. HEI should acquire technology, software, and hardware in line with the type of ODL delivery and ensure non-teaching support staff received hands-on training for efficient utilisation of these resources.

12. Available Technologies

A directory of learning management systems is available on eLearning Industry website for HEIs to use and compare various features and price plans to suit their needs and circumstances.

If HEIs are unable to identify a suitable LMS than a common LMS suggested by HEC shall be sourced and deployed for ODL delivery.

13. Conclusion

Open and Distance Learning can solve a lot of access and reach challenges for the higher education sector in Pakistan. However, policy measures should be taken to provide a quality assurance framework and support for the university to offer a student experience that has academic value and supports wellbeing. There are several gaps in online education in addition to the perception challenges, which the national policy should address to reset national confidence in ODL.

If a substantial number of HEIs in Pakistan start offering quality programs through ODL at a large scale, then intra-HEI competition and economic forces will start to kick-in making these programs more economical and of high quality. There is a greater need than ever to upscale the capacity of HEIs and their faculty in line with the need of the day. HEC may seek international cooperation and bilateral agreements to enable faculty to engage in a global learning environment.

HEC, being the regulator of higher education in Pakistan has an important role to play in developing a policy that serves the purpose. Quality of education should be the ultimate objective of any policy whether that addresses the conventional mode of learning or ODL.

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