



COMMONWEALTH *of* LEARNING

**Report of the Benchmarking of
Technology-Enabled Learning at
Jaramogi Oginga Odinga University of
Science and Technology**



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The Commonwealth of Learning (COL) is an intergovernmental organisation created by Commonwealth Heads of Government to promote the development and sharing of open learning and distance education knowledge, resources, and technologies.

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Introduction and background

Benchmarking is an important tool to compare and make deliberate progress in any field of human endeavour. For integration of technology for teaching and learning, this is relatively a new field. The Commonwealth of Learning (COL) promotes the use of technology-enabled learning (TEL) – also referred to as “digital learning” - for improving access to and quality of education and training in the Commonwealth. The approach has been to support policy development, improve institutional capacities and technological infrastructure to leverage the potentials of TEL. The process follows three-phases systematically – (i) Preparation, (ii) Development and (iii) Maturation.

Benchmarking is part of phase three, which indicates that the educational institution has taken steps to implement TEL in a systematic manner and is ready to take the next leap to continue the cycle of development. As such, the process of benchmarking is important, where it is expected that the institution as a whole participate, and the activities are validated by external experts to provide guidance and advice. Therefore, it is as much an internal exercise as an external validation activity.

This report presents the findings of the TEL benchmarking carried out at the Jaramogi Oginga Odinga University of Science and Technology (JOOUST) during September - November 2022. It provides an overview of the methodology, the validated self-study report and an action plan developed by the JOOUST team.

Jaramogi Oginga Odinga University of Science and Technology and COL Support

Jaramogi Oginga Odinga University of Science and Technology (JOOUST) is a public university in Kenya. Its vision is to be “The beacon in training, research and sustainable development” while its mission is “To provide quality university education that nurtures creativity and innovation through integrated training, research and community outreach”.

The University programmes are tailored towards “providing students with the relevant competencies, skills, knowledge and integrated understanding of different fields. To contribute to the realization of a knowledge-based economy as espoused in the Kenya Vision 2030, the University programmes are anchored on the pillars of scientific research, innovation, collaboration with the industry and technology transfer”. JOOUST has 12,570 students enrolled and 250 staff.

COL signed an agreement with JOOUST for the implementation of TEL and between June 2018 and November 2022, it already completed the Baseline Study, the TEL Policy, and several capacity-building support workshops for developing and facilitating blended learning. COL has also supported the strengthening the learning management system and open access repository at JOOUST.

Process and Methods

Once JOOUST agreed to use COL’s *TEL Benchmarking Toolkit*¹, COL engaged Dr Philip Uys, an

¹ <http://oasis.col.org/handle/11599/3217>

experienced consultant to support JOOUST remotely and validate the self-study report. A brief description of the process followed is given below. It may be noted that in contrast to the advice in the Toolkit to use two experts for the validation process, this report used only one expert engaged by COL. This was due to the travel restrictions during the period and there were no other peer institutions in Africa available to support this process.

JOOUST nominated 33 staff members to work on the ten domains of the *Toolkit* with representation for both men and women (Annex-A).

The activities during the Benchmarking exercise had five distinct stages:

- A. Setting-up processes and documentation: The Consultant discussed and agreed Prof. Abeka regarding the protocols of sharing and copying emails. An online storage and collaboration space was created to share the data and reports coming from the 10 domain teams. At this stage, the members of the team were introduced to the benchmarking process and domains through two ZOOM meetings facilitated by COL at the end of September 2022.
- B. Self-review: This was carried out by the team members and their reports with evidence shared via the online storage and collaboration space.
- C. Validation of self-review: This was carried out by the Consultant. In the process, several queries were made to provide additional information and the Consultant moderated the scores, where the evidence provided were not sufficiently justifying the scores or aligned with the rationale.
- D. Action Plan Development: A draft three-year action plan was prepared by the teams, and the Consultant interviewed nominated key stakeholders (Annex-B) to discuss the Action Plan and Self-Review. Prof Abeka attended the interview and consolidated the feedback. While the original Action Plan is with JOOUST, Annex-C presents key actions that are needed to make JOOUST a strong TEL implementing institution.
- E. The Consultant finally presented the findings in a ZOOM session with the senior management and key team members of the TEL Benchmarking team on 8 November 2022.

Validated Self-Study Report

COL's TEL Benchmarking Toolkit has ten domains to ensure that a base level of quality practices is present. Each of the benchmarking domains contains four to six performance indicators (PIs). Inherent within the PIs is the understanding that an institution may score well in one and not in another, but that this information is then used as a stimulus to improve in certain areas.

The benchmarking domains are:

1. Policy
2. Strategic Plan
3. IT Support
4. Technology Applications
5. Content Development
6. Documentation
7. Organisational Culture
8. Leadership

9. Human Resource Training
10. Technology-Enabled Learning Champions



Figure 1: Ten dimensions of TEL Benchmarking at JOOUST

Policy

Score: 4.75

Description: *The existence of a TEL policy provides direction for the use of technology in learning and teaching. It can be known by other names, such as an eLearning Policy, but its focus is to integrate technology in teaching and learning.*

The TEL policy was developed in the first phase of implementation of TEL in collaboration with COL. This was done after a survey was carried out to determine the state of preparedness of the institution.

The mission of the University is to provide quality university education that nurtures creativity and innovation through integrated training, research, and community outreach. This is properly aligned to the vision and mission of TEL Policy which is to support the university in providing quality university education by facilitating student learning using technology, optimizing available teaching and learning resources.

The integration of ICT in academic programmes is a strategic objective in the university's strategic plan. The TEL policy was developed and approved by the top University organ to promote the use of technology in teaching. The University senate consisting of Vice Chancellor, Deputy Vice Chancellors, Deans of academic schools, directors approved the E Learning and ICT Policies – there is thus high level of commitment on the part of institutional leaders.

Strategic Plan

Score: 4.00

Description: *The strategic plan ensures the commitment to TEL is implemented in a time-bound manner.*

There is a university strategic plan that guides the implementation of TEL which is still maturing. Much of its contents are included as excerpts in the university's strategic plan. The TEL project also included a plan for the number of units that should have been taught through TEL by the second phase of the project.

The strategic plan is actively promoted by the senior staff of the University who has approved online teaching and learning; online examination administration; and procurement of more software and hardware for setting up their e learning lab.

The plans in the institutions strategic plan and TEL projects both have measurable outcomes. The TEL policy requires that at least 40 units be taught via TEL and the strategic plan specifies a total of 13 programmes.

There is moderate financial provision as the CfEL that is charged with overseeing implementation of TEL has limited funds limiting training and awareness of TEL.

IT Support

Score: 4.83

Description: *The IT support department or a similar department is responsible for a centralised or decentralised approach to providing infrastructure support in the institution.*

The University has an ICT Directorate comprising of the Director and other support staff. This directorate handles the procurement, installation, and maintenance of technologies in the entire university. The university also has an elearning directorate that supports the entire university in use of technology in teaching and learning.

The policy highlights appropriate conditions of use of computing and networking facilities including the code of practise in the daily practise of computing, information systems platforms use of emails and departmental computer systems.

Reporting is formal and occurs regularly. The Director reports to the VC directly on a regular basis. There is one ICT directorate that is fully responsible for setting up and maintenance of ICT Infrastructure that services the technological needs of every employee within the institution. The Centre for eLearning (CfEL) is responsible for supporting the platform use thus ensuring that it functions well and able to accommodate the learner and faculty population. Besides, support in the use of the platform and associated ICT technologies are provided both by ICT and CfEL.

There is a university council that ratifies the ICT Policy, with an ICT Board that oversees the implementation of ICT Policy comprising of DVC(PAF) - Chairperson; Director ICT - Secretary; Four (4) Deans/Directors nominated by Senate; Registrar (PA); Registrar (RIO); Registrar (AA); Finance Officer; and not more than three (3) co-opted members from outside the University.

Technology Applications

Score: 3.50

Description: Appropriate technologies are deployed for teaching, learning and assessment as per standard academic practices.

There are a good number of well-equipped computer labs that are used by students. Teachers are encouraged to bring their own devices which can be connected to the university's network and can be used to access the Internet via the university's net.

The University has a stable Learning Management System which is accessed by both on campus and off campus students. There is limited software for content creation. The other software that may be required to support learning are mostly open source applications.

There are only a few hotspots and average bandwidth which is not adequate for students. Currently, the university offices have 100mb/s while students have 50mb/s in their hostels and open spaces. This internet bundle is not adequate for the students and needs upscaling.

There is mention of data security in the ICT policy and in the records retention and disposal policy. The ICT policy provides for protection of organisational and privacy data within the institution. This privacy clause also provides for data protection for the applications hosted within the university.

Content Development

Score: 3.00

Description: Availability of both infrastructure and human resource support for digital content development is crucial for effective TEL implementation.

JOOUST has a directorate CfEL that has a computer lab and staff including media technicians and an elearning resource production specialist who provides support to teachers and handles issues related to instructional design. There is no multimedia lab and there is unavailability of software to support production of some kinds of multimedia and interactive content.

All the CfEL staff and TEL champions have been trained to design courses on the LMS but do not develop digital content e.g., video editing, animation. All TEL champions have created courses on the LMS. Training have been conducted and the reports are available.

Teachers have unlimited access to the Internet while on campus, enabling them to access open resources. There are a number of Internet access points available for them. Most of the content and references given to students are in the LMS and are downloadable. The university has subscribed to a number of digital resources.

JOOUST has an open licensing policy included in our TEL policy to guide the use of open educational resources. Awareness of OER has been created through workshops and trainings. All TEL champions have undertaken such training, however, there is limited use of OERs as evidenced by the fact that very limited OER is referenced on LMS.

Documentation

Score: 3.75

Description: There is adequate documentation in the form of guidelines, handouts, and manuals available (online/offline) for use by the stakeholders.

There are some user manuals such as for use of the LMS and doing grading. There is an online orientation course for tutors on the LMS with CfEL staff providing one on one support.

CfEL staff are available for consultation in their offices and provide online support via email, text, and phone calls.

Lessons learned are formally documented in reports shared within the University for others to access and learn. These are available on JOOUST's institutional repository, CfEL Website, University Website and COL Oasis.

The workflow processes are documented in the Open, Distance and Electronic Learning Manual, and CfEL organogram.

Organisational Culture

Score: 3.75

Description: The organisational culture supports and fosters innovation, teamwork, learning and sharing to strengthen TEL.

Staff members have been using various technologies to support learning. There has been good attendance by staff at TEL-related workshops and there is consultation among faculty on the use of TEL.

There are TEL Champions in every academic school and these champions, who are also faculty members, provide support to other faculty members. TEL champions were trained and have been mandated as champions in the use of TEL and to support their colleagues in the use of technology. CfEL staff offer support to other staff.

There is a good level of sharing knowledge across the University through shared publications, conferences, and workshops.

There is use of customised technologies e.g., the learning management system, combining different technologies to support learning, and LMS combined with videoconferencing.

Leadership

Score: 4.25

Description: Leaders in the organisation are enthusiastic about TEL and support an evidence-based approach to decision making in relation to technology adoption.

The University leaders approved the establishment of the Centre for E-learning where TEL implementation is overseen by the deputy Vice Chancellor (DVC). The University funded the development of an online learning platform.

The University leaders have regularly attended TEL meetings and workshops. The budget has been approved by leaders for TEL Implementation. Leaders nominated TEL champions in their schools and departments to participate in TEL implementation.

Senior Management regularly review TEL progress through Reports, Performance Contracting and the E Learning Committee chaired by the DVC Academic Affairs (AA). A review of internet bandwidth is required to allow for effective virtual learning, as well as a review of existing infrastructure to ensure devices are working effectively (servers, computers, LMS capacity scaleup) for better service provision.

There are support available for development of blended learning. The leadership led by VC has presided over TEL Training workshops. During the Covid-19 pandemic, classes and examinations were taken online. Since 2022, first year students are required to have their own personal computers. Training of staff and students occur on technology enabled learning.

Financial support in the form of allowances/ stipends and honoraria are given to members during the TEL workshops and development of teaching and learning resources. A letter of appreciation is signed by the VC or DVC AA for those actively involved in TEL implementation.

The existence and full functionality of the Centre for E-Learning is evidence and motivation for staff. Staff are further motivated by JOOUST's partnership with Internet service providers to enable learners and faculty to get subsidized bundles for easy virtual learning access.

Human Resource Training

Score: 3.67

***Description:** Human resources are treated as key in delivering quality teaching and learning using technology. Staff training to strengthen the adoption of TEL is a regular feature in the institution's professional development programmes.*

Several training workshops have been organized and facilitated by highly qualified trainers on various issues related to the use of technology in teaching and learning, and pedagogical skills for blended learning.

Training sessions are regularly conducted by CfEL to update faculty and staff members in the use of TEL. The CfEL comprises of the following qualified staff members

- Director
- E-learning support staff specialists
- Platform specialists
- Media technicians
- Lab technicians.

The CfEL helps teaching staff develop content for TEL delivery but can further be strengthened by recruiting instructional designers and pedagogy experts.

Description: The existence of a group of teachers to champion TEL initiatives helps create a supportive environment for the adoption and scaling up of different technologies.

There are early adopters who have fully embraced technology in their teaching. They use video conferencing software effectively by integrating with the LMS.

TEL champions, especially those teaching common units which have a large number of students care about innovation that would make them more effective to handle the larger classes e.g., they use the LMS for conducting assessment, providing resources and other activities.

The TEL policy is in place, and this was developed in consultation with the faculty members who are leaders within their academic schools. The academic leadership has embraced technology and are using it to teach, hold meetings etc.

There are TEL champions who actively research and disseminate good practices in TEL, from within the Centre for eLearning staff, but also some teaching staff. Links are shared with the lecturers who have a common WhatsApp group whenever there is an upcoming MOOC or valuable information related to TEL.

Key Observations and Recommendations

The overall score of 3.9 on a scale of 5 shows that JOOUST is very well use TEL and can further expand integration of TEL in its courses and programmes to increase the quality and effectiveness teaching and learning. The TEL benchmarking team at JOOUST has identified several recommendations in the JOOUST TEL Action Plan to make further progress with TEL implementation. There is also strong buy-in to these from the senior leadership at JOOUST. TEL policy, ICT support and Leadership are the strong areas of TEL implementation at JOOUST. However, some of the key issues identified by the University in the Action Plan (Annex-C) as recommendations are as follows:

- Content Development
 - Provide training on the development of multimedia content
 - Offer 6 complete courses through blended mode. A complete course has approximately 60 units at JOOUST.
- Technology Applications
 - Acquire relevant software for multimedia creation and training (e.g., Adobe Captivate and Creative Suite).
- TEL Champions
 - Encourage active academic TEL research
 - Promote pedagogical innovations among the TEL Champions

Annex-A: The JOOUST Benchmarking Team

| Benchmarking Domain | Name of the participants |
|--|---|
| Policy | Prof. Silvance O. Abeka, School of Informatics and Innovative Systems (Team leader) |
| | Prof. Joseph Bosire, DVC AA |
| | Dr. Mary Orinda, School of Agriculture and Food Security |
| | Dr. Matilda Ouma, School of Agriculture and Food Security |
| | Dr. Janet Odhiambo, School of Education |
| | Dr. Benson Odongo, School of Education |
| | Dr. Pamela Were School of Biological and Physical Sciences |
| | Dr. Frankline Otiende, School of Spatial Planning and Natural Resource Management |
| Strategic Plan | Dr. Edwin Baraza, School of Business and Economics (Team Leader) |
| | Dr. Jared Oganda, School of Business and Economics |
| | Dorothy Gwada, Centre for eLearning |
| | Prof. Silvance O. Abeka, School of Informatics and Innovative Systems |
| | Prof. Joseph Bosire, DVC AA |
| | Dr. Pamela Were School of Biological and Physical Sciences |
| | Dr. Mary Orinda, School of Agriculture and Food Security |
| IT Support | Donatus Abwao, Centre for eLearning (Team Leader) |
| | Mr Samwel Ojala, School of Informatics and Innovative Systems |
| | Dr. Agnes Awuor, School of Humanities and Social Sciences |
| | Eddie Otieno, Centre for eLearning |
| | Dr. Samwel Liyala, School of Informatics and Innovative Systems |
| | Sharon Meroka, Centre for eLearning |
| | Seith Odwar, Centre for eLearning |
| | Jacob Ogendi, Centre for eLearning |
| | Viola Cheron, Centre for eLearning |
| Nancy Achieng Kizito, Centre for eLearning | |
| Technology Application | Dr. Samuel Liyala, School of Informatics and Innovative Systems (Team Leader) |
| | Dr. George Kavulavu, School of Engineering and Technology |
| | Dr. Prisca Mogutu, School of Mathematics and Actuarial Science |
| | Donatus Abwao, Centre for eLearning |
| | Sharon Meroka, Centre for eLearning |
| | Dorothy Gwada, Centre for eLearning |
| | Mr. Stephen Omondi, Centre for eLearning |
| | Mr. George Ochieng, Centre for eLearning |
| Content Development | Dorothy Gwada, Centre for eLearning (Team Leader) |

| | |
|-------------------------|--|
| | Dr. Willy Kangogo, School of Mathematics and Actuarial Science |
| | Dr. Jane Owenga, School of Health Sciences |
| | Dr. Matilda Ouma, School of Agriculture and Food Security |
| | Dr. Frankline Otiende, School of Spatial Planning and Natural Resource Management |
| | Dr. Edwin Baraza, School of Business and Economics |
| | Dr. Janet Odhiambo, School of Education |
| | Dr. Benson Odongo, School of Education |
| Documentation | Dr. Fredrick Okumu, School of Biological and Physical Sciences (Team Leader) |
| | Dr. Benson Onyango, School of Biological and Physical Sciences |
| | Dorothy Gwada, Centre for eLearning |
| | Eddie Otieno, Centre for eLearning |
| | Jacob Ogendi, Centre for eLearning |
| | Dr. Samuel Liyala, School of Informatics and Innovative Systems |
| | Mr Samwel Ojala, School of Informatics and Innovative Systems |
| | Dr. Agnes Awuor, School of Humanities and Social Sciences |
| Organisational Culture | Dr. Jared Oganda, School of Business and Economics (Team Leader) |
| | Dr. Edwin Baraza, School of Business and Economics |
| | Donatus Abwao, Centre for eLearning |
| | Sharon Meroka, Centre for eLearning |
| | Dr. Willy Kangogo, School of Mathematics and Actuarial Science |
| | Dr. Jane Owenga, School of Health Sciences |
| Leadership | Dr. Frankline Otiende, School of Spatial Planning and Natural Resource Management (Team Leader) |
| | Jacob Ogendi, Centre for eLearning |
| | Eddie Otieno, Centre for eLearning |
| | Dr. Edwin Baraza, School of Business and Economics |
| | Dr. Jared Oganda, School of Business and Economics |
| Human Resource Training | Dr. Jane Owenga, School of Health Sciences (Team Leader) |
| | Kiren Gaily, Secretariat |
| | Prof. Silvanice Abeka, School of Informatics and Innovative Systems |
| | Dorothy Gwada, Centre for eLearning |
| | Prof. Joseph Bosire, DVC AA |
| | Dr. Mary Orinda, School of Agriculture and Food Security |
| TEL Champions | Dr. Willy Kangogo, School of Mathematics and Actuarial Science (Team Leader) |
| | Prof. Silvanice Abeka, School of Informatics and Innovative Systems |
| | Dr. Mary Orinda, School of Agriculture and Food Security |
| | Dr. Matilda Ouma, School of Agriculture and Food Security |
| | Dr. Janet Odhiambo, School of Education |
| | Dr. Benson Odongo, School of Education |

| |
|---|
| Dr. Frankline Otiende, School of Spatial Planning and Natural Resource Management |
| Dr. Edwin Baraza, School of Business and Economics |
| Dr. Jared Oganda, School of Business and Economics |
| Dr. Samuel Liyala, School of Informatics and Innovative Systems |
| Mr Samwel Olala, School of Informatics and Innovative Systems |
| Dr. Agnes Awuor, School of Humanities and Social Sciences |
| Dr. George Kavulavu, School of Engineering and Technology |
| Dr. Prisca Mogutu, School of Mathematics and Actuarial Science |
| Alice Ngele, Secretariat |
| Dr. Jane Owenga, School of Health Sciences |
| Dr. Fredrick Okumu, School of Biological and Physical Sciences |
| Dr. Pamela Were School of Biological and Physical Sciences |
| Dr. Benson Onyango, School of Biological and Physical Sciences |
| Donatus Abwao, Centre for eLearning |
| Sharon Meroka, Centre for eLearning |
| Eddie Otieno, Centre for eLearning |
| Jacob Ogendi, Centre for eLearning |
| Dorothy Gwada, Centre for eLearning |
| Kiren Gaily, Secretariat |

Annex-B: Interviews conducted by the Consultant on 3rd November 2022

1. Prof. Stephen Gaya Agong'- Vice Chancellor
2. Prof Joseph Bosire- DVC- AA
3. Dr. Walter Akuno- Registrar Academic Affairs

Note that Prof. Silvanice O. Abeka, key contact at JOOUST, attended the interview (with Ms Dorothy Gwada) and consolidated the feedback.

Annex-C: JOOUST TEL Action Plan

Important:

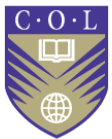
- 1) *These are some of the key actions identified by the JOOUST staff.*
- 2) *All figures estimated are not reviewed/verified.*

| Domain | From When (month and year) | By when (month and year) | By who | With what resources (<i>technical and monetary</i>) | Indicators of success |
|---|----------------------------|--------------------------|------------------|--|--|
| 1. Policy | | | | | |
| a. Review the entire TEL policy which was developed in 2019 when we were at formative stages of implementing TEL and now we are maturing. | May 2023 | July 2023 | E-Learning Board | Technical resources required including Survey Report on the potential gaps. Financial resources required including facilitation for stakeholders meeting workshop (Kshs 350,000). | Reviewed TEL Policy Approval of the reviewed TEL Policy by the University Senate |
| b. Sensitization of TEL vision and mission among the new staff | Jan 2023 | April 2023 | CFEL | Provision of budget and support staff for the training Workshops and orientation. (Kshs 250,000) Materials for TEL publicity in the University (Kshs 50,000) | More use of TEL in the University TEL publicity newsletter in the University (Quarterly Issue) |
| 2. Strategic Plan | | | | | |
| c. Conduct an evaluation after every six months on actions recorded in this Action Plan emanating from the benchmarking domains. | April 2023 | April 2028 | CfEL | TEL champions to conduct the evaluation. | Reports indicating the targets that have and have not been met. |
| 3. IT Support | | | | | |
| d. Increase wireless access points from 8 to 20 and bandwidth from 150Mbps to 900 Mbps | Jan 2023 | Dec 2023 | ICT | Financial resources required to: - Create multiple internet gateway in the university to reduce downtime (Kshs 80,000) -Subscribe to adequate bandwidth with an estimate of 900Mbps within main campus (Kshs 1,800,000 per year) | - Additional access points and speed of internet. -20 more multiple internet gateways created within the university to reduce downtime. -Adequate bandwidth with an estimate of 900Mbps within main campus |
| e. Develop a data protection | July 2023 | Dec 2023 | ICT and | Technical resources required including Survey | Data protection policy |

| Domain | From When (month and year) | By when (month and year) | By who | With what resources (<i>technical and monetary</i>) | Indicators of success |
|---|----------------------------|--------------------------|--|---|---|
| policy and procedures. | | | ELEARNING BOARD | Report on the potential gaps. Financial resources required including facilitation for stakeholders meeting workshop (Kshs 350,000). | Developed. Launch of JOOUST Data Protection Policy |
| f. Provide high performance network infrastructure at all campuses | Nov 2022 | Dec 2023 | ICT and University Management | Both Technical and financial resources required in order to: -Improve the local area network in the university campuses using fibre optic (Kshs 1,560,000) - Create multiple internet gateway in the university to reduce downtime (Kshs 80,000) -Subscribe to adequate bandwidth with an estimate of 900Mbps within main campus (Kshs 1,800,000 per year) | -Improved the local area network in the university campuses using fibre optic. -20 more multiple internet gateways created within the university to reduce downtime. -Adequate bandwidth with an estimate of 900Mbps within main campus |
| g. Create a Multimedia lab for content creators | Jan 2023 | Dec 2024 | CFEL, FINANCE, ICT University Management | Provision of budget and support staff for the creation of Multimedia lab and acquiring necessary software (Kshs 4,350,000). | 1 Multimedia Lab set up within the University |
| 4. Technology Applications | | | | | |
| h. Acquire relevant software for multimedia creation and training (e.g., Adobe Captivate and Creative suite). | Jan 2023 | Dec 2024 | CFEL, FINANCE, ICT University Management | Provision of budget for acquiring necessary software | Relevant software available and used by staff |
| 5. Content Development | | | | | |
| i. Provide training on the development of multimedia content | Jan 2023 | Dec 2024 | External facilitators and CFEL | Provision of budget and support staff for the training and facilitation of trainers and workshop package required to be used for training Workshop on blended learning regularly to assist teachers develop courses. (Kshs 350,000 every Semester). | 2 training Workshops for Capacity building of staff and faculty for developing multimedia content. |
| j. Offer 6 complete courses through blended mode. A complete course has approximately 60 units. | Sep 2023 | Dec 2025 | CfEL, Lecturers, Academic Affairs Department | Software, technical support | Course units mounted on the LMS |
| 6. Documentation | | | | | |
| k. Increase awareness of the existence institutional repository to share lessons learnt, tutorials, research work etc.. | Jan 2023 | Dec 2025 | CFEL and Researchers | Develop and share digital campaign materials. We shall use our in-house media Technicians. | Reports and publications in the institutional repository |
| l. Develop a workflow process related to TEL implementation | July 2023 | Oct 2023 | ELEARNING BOARD | Technical through benchmarking with other institutions who have Implemented TEL strategic | Developed workflow process for Implementation of the TEL |

| Domain | From When (month and year) | By when (month and year) | By who | With what resources (<i>technical and monetary</i>) | Indicators of success |
|--|----------------------------|--------------------------|-----------------------|--|---|
| | | | | plan. Financial resources required for developing workflow process related to TEL implementation (Kshs 500,500). | Policy. |
| m. Develop a guide to implement open licensing and open education, in line with the TEL Policy | March 2023 | Aug 2023 | ELEARNING BOARD | Technical Resources needed and Benchmarking. Financial resources required including facilitation for stakeholders meeting workshop (Kshs 350,000). | An implementation Guide. Approval of implementation Guide by the University Senate |
| 7. Organisational Culture | | | | | |
| n. Reward innovation and knowledge creation | Jan 2023 | Dec 2025 | University Management | Financial resources required for rewarding Innovation and knowledge creation (Kshs 3,576,500). | Reward staff with at least 1 innovation or 3 e resources developed |
| o. Instil a culture of knowledge creation and Sharing | Jan 2023 | Dec 2025 | University Management | Both technical and financing. Provision of budget and support staff for the training workshop to instil culture of knowledge creation and Sharing. (Kshs 350,000 every Semester). | 30 Publications every year and 2 more trainings on knowledge creation every semester. |
| p. Set up support group among faculty and staff on the use of technology for teaching and learning | Jan 2023 | March 2023 | CFEL | Technical resources needed to set up of support group among faculty and staff on the use of technology for teaching and learning. | TEL Support groups and active participation in Community of Practice |
| 8. Leadership | | | | | |
| q. Increase budget for CFEL to cater for infrastructural development (the budget will be increased by 100% in the first year, July 2023 and then a further 70% increase in the second year, July 2024) | Jun 2023 | Jun 2025 | University Management | Financing resources through increased CFEL Budget which is currently at Kshs 1,782,910. | Increased Budget |
| 9. Human Resource Training | | | | | |
| r. Hire an instructional designer | June 2023 | Dec 2023 | University Management | Financing resources required for Hiring instructional designer through increased CFEL Budget from Kshs 1,782,910 to Kshs 15,700,456. | One instructional designer employed |
| s. Increase the number of Trainings for capacity building, | Jan 2023 | March 2025 | CFEL and External | Both technical and Financing resources required for more trainings for capacity building. | 250 teaching staff trained |

| Domain | From When (month and year) | By when (month and year) | By who | With what resources (<i>technical and monetary</i>) | Indicators of success |
|---|----------------------------|--------------------------|--------------------------------------|---|--|
| Including for multimedia creation for online delivery | | | facilitators | (Kshs 350,000 every Semester) | 40 developed multimedia content by TEL champions 2 training sessions for full time staff, 1 Orientation workshop for new staff every semester. 2 External trainings for our technical staff fully sponsored by the University. |
| t. Revamp the Centre for eLearning (CfEL) that helps teaching staff in content development for TEL delivery | Jan 2023 | Jun 2025 | University Management and CFEL staff | Both technical and Financing resources. Provision of budget and support staff for the training and facilitation of trainers and workshop package for content development for TEL (Kshs 350,000 every Semester) | More staff employed; More capacity building workshops organized |
| u. Provide orientation and regular training to teachers to use ICTs effectively | Jan 2023 | Dec 2025 | CFEL and University management | Provision of budget and support staff for the training and facilitation of trainers and workshop package (tea, Lunch and refreshments) required to be used for training Workshop on blended learning regularly to assist teachers develop courses. (Kshs 350,000 every Semester) | All new and fulltime lecturers trained on blended learning twice a year. |
| 10. TEL Champions | | | | | |
| v. Encourage active academic TEL research | Jan 2023 | Dec 2025 | University Management | Technical resources by forming research groups with the aim of encouraging active academic TEL research. Provision of budget for the researchers to conduct research e.g. payment for research assistants, data analysis, report writing and pay publication fee for manuscript (Kshs 550,000 every Semester). | 30 Academic papers for publication every year and Increased number of conference papers |
| w. Promote pedagogical Innovations among the TEL Champions | Jan 2023 | Dec 2025 | CFEL | Both technical and Financing resources for promoting pedagogic Innovations among the TEL Champions (Budget of Kshs 3,500,000). | Pedagogic Innovations |
| x. Promote research and dissemination of good TEL practices | Jan 2023 | Dec 2025 | CFEL | Both technical and Financing resources for promoting research and dissemination of good TEL practices (Kshs 550,000 every Semester). | 30 Publications in refereed Journals every year. 10 Paper presentation in learnt conferences, Reports uploaded in our e repositories |



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