



COMMONWEALTH *of* LEARNING



MINISTRY OF HIGHER EDUCATION

**Report of the Benchmarking of
Technology-Enabled Learning at
Universiti Malaya**



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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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Contents

Introduction and Background 7

Process and Methods 8

Validated Self-Study Report 8

Key Observations from the Report..... 15

 Annex-A: The UM Benchmarking Team 16

 Annex-B: Interviews conducted by the Consultant..... 16

 Annex-C: Action Plan 17

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) for improving access to and quality of education and training in the Commonwealth. The approach has been to support policy development, improve institutional capacities to develop blended courses, and strengthen 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 assumes 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 TEL benchmarking focuses on self-study, where relevant stakeholders from the institution participate thereby having active involvement, and the self-study report is validated by external experts and provide guidance and advice, where needed. Therefore, it is as much an internal exercise as an external validation activity.

The Ministry of Higher Education (MoHE), Government of Malaysia recognises the importance of technology-enabled learning in its *Malaysia Education Blueprint 2015-2025 (Higher Education)*, which focuses on global online learning. There is also a national eLearning policy (DePAN 2.0) and a detailed eLearning guidelines for Malaysia Higher Education Institutions (HEIs). Most HEIs follow these policy and guidelines to provide increasing access to quality higher education in Malaysia. Malaysia, as a country has also taken steps in focusing on developing massive open online courses and promote future proof talents based on the needs of the 4th industrial revolution.

In 2021, the MoHE requested COL to support assessing the status of technology-enabled learning in select universities of Malaysia by adopting COL's TEL Benchmarking Toolkit. Universiti Malaya (UM) is one of the six universities identified by the MoHE. The other universities are:

- Universiti Putra Malaysia
- Universiti Kebangsaan Malaysia
- Universiti Pendidikan Sultan Idris
- Universiti Teknologi PETRONAS
- Universiti Teknologi Malaysia.

Universiti Malaya (UM) is a public university in Malaysia. Its vision is “A global university impacting the world” while its mission is “Pushing the boundaries of knowledge and nurturing aspiring leaders”. UM has just under 18,000 undergraduate students and just over 11,00 postgraduate students enrolled.

This report presents the findings of the TEL benchmarking carried out at the UM during November 2021 - March 2022. It provides an overview of the methodology, the validated self-study report and an action plan developed by the UM team.

Process and Methods

Once UM agreed to use COL's *TEL Benchmarking Toolkit*¹, COL engaged a consultant to support UM 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 ready to support this process.

UM nominated 14 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 with the staff of Centre for E-Learning regarding the protocols of sharing and copying mails. An online storage and collaboration space was created to share the data and reports coming from the 10 domain teams. The Consultant also introduced the benchmarking process to the members of the Benchmarking team at UM, and MoHE representatives through video conference meeting facilitated by COL.
- 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 five nominated key stakeholders (Annex-B) to discuss the Action Plan. Feedback was consolidated and provided to the University representative and back-up person by the Consultant. Annex-C presents key strategic actions that are needed to make UM a strong institution implementing TEL.
- E. **Closing and Reporting:** The Consultant also presented the findings in a video conference session with the senior management, key team members of the TEL Benchmarking at UM, and MoHE. The present narrative report is also part of this stage, where the report has been reviewed by the university concerned before submitted to the MoHE.

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 some domains but score low in other domains. This information is then used as a stimulus to improve where needed promoting a cycle of continuous improvements.

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

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 UM

Policy

Score: 3.75

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.

A comprehensive documented guideline on teaching and learning has been formulated at the central level. The policy supports the university mission statement by providing relevant methods and use of the relevant technology to nurture teaching and learning activities effectively. The elements of the Guideline are well understood and tied to UM's Key Performance Indicators (KPIs). There is an eLearning policy for the university, instituted since

February 2016. The policy is due for review in 2022.

UM utilises technologies in executing their core tasks and activities. For example, in teaching and learning activities they use a Learning Management system called SPeCTRUM (based on the Moodle platform), for online exam they have in place an E-Proctoring system. However, institutional leaders are still reluctant, in some parts, to adopt technology for online related teaching and learning activities, particularly in terms of assessment. Although fully online classes were generally adopted campus-wide, uptake was mostly in terms of delivery only.

Strategic Plan

Score: 3.75

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

The university transformation lab and strategic planning in early 2021 drove the TEL initiatives. The university has a strategic plan for 2021-2025 which is focused on transformation. The strategic plan and transformation plan initiatives are systematically managed, and they all have specific measurable outcomes. The taskforce for the initiatives has already come up with activities needed to support the strategies and plans.

The UM ICT strategic plan has outlined 13 philosophies including the UM Smart Sustainable Campus Philosophy. Three out of the 13 philosophies are to support TEL: (i) Support smart learning environment, (ii) Central facility for High Performance Computing (HPC), (iii) Support Academic R&D to promote sustainability.

The TEL benchmarking team considers that more on TEL needs to be done. However, the university has recently invested in remote learning and e-proctoring, and procurement of digital textbooks.

IT Support

Score: 4.67

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

The campus community is well supported by the IT department, which maintains the online platforms and networks.

The University has established a Policy, Procedure and Rules pertaining to ICT. The existing policies, procedures and rules covers all the ICT governance perspectives such ICT service and support, security, audit, compliances, ICT operations, strategic plans, ICT procurements, maintenance, objective qualities and also user satisfaction.

The Centre of IT (PTM) is under the Associate Vice Chancellor (AVC) who reports to the Vice Chancellor (VC). All the heads of Department in PTM reports regularly to the PTM Director and AVC. Therefore, all the ICT updates and milestones are being updated to senior management on a regular basis through various committees and its progress.

There are dedicated IT teams to support the university community covering teaching and

learning, security, network, infrastructure, applications, big data, high performing computing and ICT strategic plans.

There are various committees that oversee the implementation of ICT policies at UM. The ICT Division at PTM has management that are highly qualified IT personnel. They regularly receive the latest technology updates to ensure the technology requirements are aligned with university needs and requirements.

Technology Applications

Score: 3.5

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

The university provides adequate infrastructure for staff and students. All lecturers are provided with a personal computer or laptop. There are various facilities for teaching and learning purposes such as classrooms with computers and LCD projectors and computer labs throughout the university. In addition to computer labs, each Faculty has Learning spaces equipped with adequate and advanced eLearning devices (smartboard, smart tv, IP camera etc). There is adequate availability of servers for eLearning provision.

However, the computers and infrastructure may need to be upgraded. Although the computers and other infrastructure are constantly maintained by technicians at each Faculty.

UM provides a unified eLearning platform to support whole campus usage for teaching and learning. In addition, other platforms such as Microsoft Teams enable lecturers and students to interact in real time for learning is available. Many of the staff use Google Meet for video conferencing. These and other essential computer software are provided for free to students and staff. However, applications for teaching and learning software such as for brainstorming e.g., Miro or Padlet, the lecturers need to have their own individual subscriptions to these software applications. This has been identified as a key concern by some members of the Benchmarking team.

The university provides excellent Internet (wired and wifi) speed and coverage in faculties and colleges. However, from the staff point of view the WiFi available in UM can be considered limited for students in terms of coverage and speed. As students and staff access the network sometimes synchronously, the Internet speed may not be sufficient for such classes.

All information is governed by Information Security Management System (ISMS). Network traffic is monitored and filtered by security appliance and software to prevent hazardous attempts. The policies are established and available to the public. However, individual users may not be aware of the need for data security.

Content Development

Score: 3

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

Technical skills for digital multimedia content creation for teaching and learning is not a

common skill among academics. Support is provided at central level, by UM's IT Centre's (called Pusat Teknologi Maklumat (PTM) Multimedia Unit (3 developers) and Academic Development and Enhancement Centre (ADEC) (5 instructional designers). Both divisions, help some academician to create the digital content based on the requirement and demand on the online courses. In general teachers develop their own courses with limited help. Created content have been published via the open courseware website, Spectrum and also via Micro-credential platform.

UM has instructional designer to develop specific content for the micro-credential and MOOC since 2019. Before them, the task was under the Multimedia development unit at PTM that worked on opencourseware.

There are various online resources such as Adobe Creative Cloud, MS Teams. Academics are able to access the online resources for their content development. Training to use freely available web2.0 tools for education has been provided by ADEC since its inception. With Covid-19, the university has provided guidelines on online teaching and learning to help teachers transition into online delivery.

There is a strong support from the management level to encourage usage of open educational resources (OER) among the campus community. Academics are highly encouraged to develop MOOCs and micro-credential courses. It also supported with the required policy, guidelines and incentives.

Documentation

Score: 3.5

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

The university has its own online teaching and learning guidelines, and provides training aligned with that purpose. There are monthly eLearning clinics organised by the university's ADEC to support teachers needing assistance. Faculty-based eLearning committees assist the teachers in online teaching.

Students can lodge complaints at the university's Helpdesk website when assistance is needed. Each faculty has an Informatics Unit to provide assistance. Students are provided with user guides and training during orientation to support the usage of SPeCTRUM and Microsoft Teams.

ADEC's website is constantly updated with the links to all resources of past training sessions. Lessons learnt are being shared.

The university has its own online teaching and learning guideline that is updated annually and refers to workflow processes and responsibilities.

Organisation Culture

Score: 3.5

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

There is good uptake of TEL based on the uptake and participation of training workshops and courses for TEL and based on the utilisation of SPeCTRUM for teaching and learning. The majority of the internal survey respondents thought TEL is interesting and the way forward in teaching.

Faculty and professional staff members support each other in using technology in teaching and learning as based on perceived personal experiences, evidenced involvement in training sessions and the response in an internal survey. There are series of sharing of best practices called peek-into-my-class. There are also training sessions and e-Learning clinics conducted regularly throughout the year to support all teachers and lectures.

UM is a research University. UM provides fair support for knowledge creation. Every year UM provides a specific grant dedicated for teaching and learning that focuses on promoting a culture of knowledge creation with respect to teaching and learning.

Innovations to enable learning with technology are moderately fostered in the organisation as based on perceived experiences working in the university and related to the availability of grant for teaching and learning such as the UM LiTER (Universiti Malaya Learning Improvement and Teaching Enhancement Research) grant.

Leadership

Score: 3.5

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

An online dashboard was established by the management to measure the percentage of blended learning in all courses. The captured data provides information leading to identification of lecturers who are doing well in teaching and learning. The identified lecturers were invited to a sharing session called peek-into-my-class. Living Lab and a taskforce has been set up to support the University Malaya Strategic Plan. Every taskforce and Living Lab member need to regularly report the progress to the appointed secretariat. This is then reported to the University management meeting. Remote Learning courses are available since Semester 1 2021/2022 and Open & distance learning courses are offered in Semester 1 2022/23. A Taskforce was formed as part of the university transformation lab and strategic planning to further develop these initiatives.

The university has an established e-learning policy. The senior leaders directed all teachers to follow this policy. The university has also taken initiatives to provide a data plan support for students by signing a strategic MOU with telco "Celcom".

Human Resources Training

Score: 4

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 UM's professional development programmes.

The ADEC supports new lecturers to begin their academic careers in UM, through a range of training programmes, beginning with the Emerging Scholars Leadership Advancement

(Emerald) Programme. UM ADEC and the Human Resources Department have consistently held eLearning workshops over the years. ADEC with eLearning experts, plan, monitor and provide training as a central governance unit for TEL.

The ADEC organises monthly webinars and workshops related to TEL. The webinars and workshops are open to all staff. The online TEL resources are provided for self-learning.

ADEC has selected eLearning coordinators for each Faculty where all these coordinators are the central for ADEC to coordinate training and channelling of information. In addition, the Centre of Information Technology (CIT) (Application Team, Server Team, Network Team and Multimedia Team) have qualified trainers and excellent support staff in various fields of IT.

Most faculties have eLearning Teams and an eLearning coordinator for each department. In addition, ADEC continuously update their TEL resources on their website for the staff to refer to. Concurrently, the CIT Multimedia Team and ADEC Content Development Unit are available to help lecturers develop their content.

The CIT Multimedia Team update the software and upload the ICT course notes on their website. Teachers seek support from ADEC and CIT Multimedia Team on an ongoing basis while delivering their courses.

All IT staff recruitment need to pass certain criteria that meet the skills needed and certified with at least Diploma/Degree. They are trained and continuously updated by attending courses organised by UM or PTM. UM has qualified trainers and excellent support staff members in various fields of IT.

TEL Champions

Score: 4.25

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.

As a general overview of TEL adopters in UM, the number of users who achieved the definition of active learning (i.e., blended learning) courses on the university LMS system (SPeCTrUM) is 85% (908/1072) in Nov 2021, which has increased from 40% when data was first collected in 2014. Centrally, the position of the eLearning Head was established in 2008.

The Deputy Vice Chancellor (Academic) has convened a Creative Learning & Innovative Teaching taskforce under the UM strategic plan 2021-2025. Centrally at ADEC, the post of eLearning head - coordinates training and identifies suitable university-wide TEL initiatives. ADEC eLearning clinics and workshops are run by experienced TEL champions who provide one-to-one consultations for lecturers to choose suitable pedagogic innovations.

The UM head of eLearning coordinates training and identify suitable university wide TEL initiatives. Each faculty has their own eLearning coordinator whose job is to provide local support to lecturers (20 coordinators in total). There are also faculty-specific units which focus on eLearning such as UMeHU and MERDU (Faculty of Medicine) and CREED (Faculty of Engineering).

The UM teaching innovation grant scheme awarded 63 TEL-related projects out of 134 (47%). There are a number of TEL-related projects funded from external agencies. UMEExpert (the lecturer database) lists 26 staff members with eLearning as their research expertise.

Key Observations from the Report

The overall score of 3.75 on a scale of 5 shows that UM is well placed to increase the quality of TEL. The TEL benchmarking team at UM thus has identified several recommendations in the action plan (Annex-C) to make further progress with TEL implementation. However, some key areas that needs additional focus are as follows:

- Revise the eLearning policy and keep it up to date as per the need of the times.
- University leaders need to focus on TEL implementation as a regular agenda of university-wide discussion. This also includes a focus on TEL at the Faculty meetings.
- Create training programmes for content development – academic and non-academic supporting staff
- Support teachers on instructional design for online/blended courses as well as MOOCs and micro-credentials. The training programmes also may focus on instructional design to build competencies of teachers in this area.
- Set up a policy for recognition of exceptional work in the area of TEL.

Annex-A: The UM Benchmarking Team

Dr. Zahiruddin Fitri Bin Abu Hassan	Deputy Director, Head of e-Learning Unit Center for Academic Improvement
Dr Mohamad Yazed Ahmad	Senior Lecturer
Dr Nur Azah Hamzaid	Associate Professor
Dr Donnie Adams A/L Paramasivam	Senior Lecturer
Dr Dorothy DeWitt	Associate Professor
Dr Eunice Soh	Senior Lecturer
Mr Kamarazaman Md Zaid	Language Teacher
Dr Lee Yew Kong	Senior Lecturer
Dr Kanmani Munusamy	Senior IT Officer
Mrs Marina Mansor	Senior IT Officer
Mr Shukri Hadafi	IT Officer
Mrs Thanalethumi Dharmalingam	IT Officer
Dr Vinod Pallath	Senior Lecturer
Dr Norhidayah Mohd Tahir	Senior Lecturer

Annex-B: Interviews conducted by the Consultant

1. Prof Aziz Abdul Raman, Deputy Vice Chancellor (Academic)
2. Prof Yatimah Alias, Academic Strategic Planning (ASP) Centre

Annex-C: Action Plan

(These are some of the key actions identified by the UM staff. All figures are estimates only).

	From When (Month and year)	By when (Month and year)	By who	With what resources (technical and monetary)	Indicators of success (Quantify where possible)
1. Policy					
a. Refine the 4th edition online teaching and Learning Guideline	MAY 2022	SEPT 2023	Identified expert, ADeC	Expert input, monetary, time	Produce the 5th edition online teaching and Learning Guideline
b. Enhance engagement to convey formulated 5th edition online teaching and Learning Guideline to the campus community	SEPT 2023	JUNE 2024	University leadership team	Time, as a meeting agenda at faculty level	Engagement session covers 70% of university academic staff. All university leaders use and support TEL in their faculties.
2. Strategic Plan					
a. Expand awareness of the Strategic Plan and Transformation Plan	MAY 2022	JAN 2024	University leadership team	University leaders, engagement sessions	More process owners to execute and monitor the progress of the Strategic Plan and Transformation Plan. 70% of university staff understood their roles and actively aware where their work fits into the SP and TP.
b. Commit optimum resources (especially financial) to enable execution of the SP and TP	MAY 2022	NOV 2022	Identified expert, Project management office	Monetary, expert input, time	Up to 75% of projects under TP and SP are running with optimum financial support
c. Hold midterm review of the SP and TP to ensure successful execution	JUNE 2022	JULY 2022	Task force leaders and members, Project management office	Task force members, university staff	Midterm review exercise completed, and revise plans are running
3. IT Support					
a. Ensure efficient IT operation for teaching and learning	FEB2022	Dec 2024	IT management, HR	1. IT staff, 2. Relevant committee, 3. Human Resource 4. TNC(A)	1) Reduce 50% of number of Helpdesk cases reported after 6 months of the ICT module/product launching. 2) At least 80% of IT staff attended at least 1 course for future readiness training every year. 3) Conduct at least 3 awareness programme for campus community on the ICT plan or product that support TEL 4) Conduct at least 2 training in a year to ICT staff at PTJ to delegate the ICT support for TEL.
b. Planning of future ready infrastructure - Prepare complete	Feb 2022	Dec 2024	IT management	IT staff,	1) Produce at least one (1) ICT design plan draft by Dec 2022.

	From When (Month and year)	By when (Month and year)	By who	With what resources (<i>technical and monetary</i>)	Indicators of success (Quantify where possible)
planning on the infrastructure readiness for future teaching and learning				Relevant committee, Bursary Human Resource TNC(A) ADeC Technology Partners	2) Taskforce appointment by Dec 2022 3) Review infrastructure policy at least once every year specifically for TEL 4) At least 80% of IT staff attended at least 1 technology update related to TEL every year.
c. Continual enhancement planning for ICT to support TEL	MAR 2022	DEC 2024	IT management, JKICT	IT staff, relevant committees, campus stakeholders	1) Produce continual ICT blue print every 3 years. 2) Infrastructure plan published after engagement session with campus community 3) At least 50% of the ICT Policies are reviewed according to the need
4. Technology Applications					
a. Planning of future ready infrastructure	MAR2022	DEC2023	IT management, JKICT, ADeC	IT staff, relevant committees, campus stakeholders	Infrastructure plan published after engagement session with campus community
b. Strategic Plan for more subscription of TEL applications	APRIL2022	DEC2024	IT management, JKICT, ADeC	Monetary, IT staff, relevant committee	1) Yearly identification of TEL applications required by lecturers. 2) 30% of successful deployment of new application required by lecturer for TEL each year based identification. 3) Number of subscriptions to TEL applications (Application monitored by ADeC)
c. Dissemination of information to campus community on access of readily available applications so that they are optimally used (training of academics and non-academic staff to use apps needs to be considered also)	FEB 2022	DEC 2024	ADeC, Identified champions	Corporate Comms office, trainers, champions	30% increase of existing services usage annually
d. TEL toolkit for every lecturer (e.g., Webcam, Headphone, Broadband Devices, HMDI connectors, USB Cables, laser pointer)	APRIL 2022	JUNE 2023	TNCA, University leadership	Monetary, IT staff, relevant committee	Every lecturer provided with one toolkit

	From When (Month and year)	By when (Month and year)	By who	With what resources (technical and monetary)	Indicators of success (Quantify where possible)
5. Content Development					
a. Create training programs for content development – academic and non-academic supporting staff	FEB2022	SEPT 2022	a) ADeC b) Faculty	Expert input, monetary, HR	a) Number of training programs delivered b) Recorded numbers of staff trained
b. Create Instructional Designer posts to support development. Application of warrant (post) to JPA	MAR2022	NOV 2022	HR	Monetary, HR	Number of ID post created
c. Reward policy and culture of appreciation. Incentive/reward to faculty for income generated from SATU, Remote Learning (RL), Online Distance Learning (ODL) & Micro credential (MC)	OCT 2022	DEC 2022	University Management	University leaders, monetary	1 major award event completed
6. Documentation					
a. Develop instructional resources and tools, including Innovative Pedagogy Fact Book (for educator)	SEPT 2022	JUN 2023	ADeC, Identified Experts, liter gold	Content authors, publisher, monetary	Publication of 1 guidebook
b. Disseminate technology guides for undergraduates and staff (YouTube, TikTok and media social platforms)	FEB 2023	DEC 2025	University communications team, ADeC	Content authors, Corporate Comms office	Publication/dissemination of technology guides
c. Provide basic productivity applications (Word, Excel & PowerPoint) training for undergraduates	FEB 2023	DEC 2025	HEP of fice, KMUM, TD HEP, CITRA	Student affairs office	50% of new students attend basic training every new cohort
d. Put in guidelines for PTG in MQF form	MAY2022	NOV 2022	TNCA, ADeC	Content authors,	UM PTG Guidelines published
7. Organisational Culture					
a. Protected time for TEL attempts or innovation	MAY 2022	JUNE 2023	TNCA, Deans, Heads of departments, & academic staffs	University leaders	A guideline is developed by the TNCA office to support TEL attempts or innovation Lecturers report number of protected hours for TEL innovation

	From When (Month and year)	By when (Month and year)	By who	With what resources (technical and monetary)	Indicators of success (Quantify where possible)
b. Reward policy and culture of appreciation	NOV 2022	DEC 2023	TNCA, University leadership	Monetary, time	Awards TEL Innovation and Seed Funding to support TEL Innovations
8. Leadership					
a. University leaders support and encourage TEL implementation	APRIL 2022	JUNE 2023	TNCA, University leadership, BSM, ADEC	Time, technical support, financial support	The job scope of the support staff needs to realign to the current teaching and learning demands. Initiate the development of teaching portfolio to evaluate TEL implementation (in stages). Ensure the infrastructure, training and adequate number of support staff for implementation of TEL.
b. Include TEL implementation as part of the faculty meeting's agenda	APRIL 2022	JUNE 2023	TNCA, University leadership, BSM, ADEC	Time, technical support, financial support	TEL agenda is included in the faculty meetings across UM.
9. Human Resource Training					
a. Identification of specific TEL support needs by faculty management and academic staff	JUL 2022	SEP 2022	Dean, Admin Manager Faculty,	Experts, Trainers, Module, Monetary	Minimum 2 support needs for each department
b. Empowerment of non-academic staff to support TEL	SEP 2022	JAN 2023	HTD, Deans	Monetary, time, training providers	2 completed TEL collaborative projects between academic & non-academic staff
10. TEL Champions					
a. Identification and appointment of champions to support and enhance TEL practices	APR 2022	APR 2024	University leadership, BSM, ADeC, Deans	University leaders, experts	At least 2 champions appointed at PTj level with clear deliverables
b. Development of guiding metric to define TEL innovations	APR 2022	SEPT 2022	Experts, TNCA	Time, monetary	Guiding metric created and applied in the university.
c. Develop a system to support champions in implementing TEL innovation	SEPT 2022	DEC 2025	Deans, Admin Manager, Champions	Experts, champions	An established community of practice including non-academic staff



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