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MINISTRY OF HIGHER EDUCATION

Report of the Benchmarking of Technology-Enabled Learning at Universiti Putra Malaysia



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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) 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 Putra Malaysia (UPM) is one of the six universities identified by the MoHE. The other universities are:

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

Universiti Putra Malaysia (UPM) is a public, research university in Malaysia. Its vision is “To become a university of international repute” while its mission is “To make meaningful contributions to the Creation of Prosperity and Development of the Nation and the Well-Being of All Human Beings through the Exploration and Dissemination of Knowledge”. UPM has just under 26,000 students enrolled.

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

Process and Methods

Once UPM agreed to use COL's *TEL Benchmarking Toolkit*¹, COL engaged a consultant to support UPM 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.

UPM 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 responsible 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 UPM, 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 UPM 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 UPM, 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 UPM

Policy

Score: 4.25

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 is being followed by various entities in UPM. The objectives of each policy and guidelines published for TEL are to support the vision of UPM to be an internationally reputed university.

UPM is committed to e-Learning and this objective has been written in a policy:

(a) promote and cultivate e-Learning continuously in the implementation of teaching and

learning by teachers and students; (b) provide appropriate infrastructure to support the implementation of e-Learning within and outside the campus; and (c) strengthen e-Learning by improving quality of the content through enhancement of eContent for teaching and learning as prescribed by the University.

UPM has achieved the target for the Key Performance Indicators (KPI) related to innovation in teaching and learning 100%. However, teachers in the University share the view that there is more needed to be done in implementing the policies.

Strategic Plan

Score: 4

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

KPI's related to TEL are outlined in the UPM ICT Strategic Plan. There is a quarterly review of the achievement of this KPI that need to be presented in a meeting involving the management team of the university.

As an example of active promotion, in 2018-2019, a project on transformation of innovative teaching and learning approach was conducted, which listed 10 initiatives which are blended learning, innovative learning space, best practices of teaching, micro-credentials, immersive learning, diversity, global exchange, personalized and using learning objects (including open educational resources (OER)).

KPIs related to TEL are outlined in the UPM ICT Strategic Plan which specifies the target of the annual achievement for each TEL directive e.g., blended learning scores are predefined and reported progressively, the number of massive open online courses (MOOCs) to produce is tracked, and the number of micro-credential courses is targeted.

While the university spends a substantial amount on the eLearning budget, there are wide variation in the implementation of TEL across the faculties.

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 UPM.

UPM has used digital technologies for many years. A centre called iDEC (InfoComm Development Centre) was created to oversee the operations of technological information and communication support.

There is an established ICT policy. The highest management levels related to the IT in the university are the Vice Chancellor and the Chief Information Officer (CIO). The Director of the IT department reports to the CIO.

IT staff are fully responsible for TEL including planning, development, maintenance, and support. However, their capacity is limited (e.g., number of staff, time, infrastructure) to meet the current needs of the university which result in the delay of certain development planned for TEL.

UPM has a committee for information technology and communication which is led by the Chief Information Officer (CIO) to oversee the overall university ICT policy. In addition, there are various working committee that ensures the implementation of the ICT policy (e.g., Working Committee for Information Technology).

The head of the IT support department has a relevant and qualified background.

Technology Applications

Score: 3.75

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

The University provides some infrastructure (e.g., network, technologies, and systems) and hardware (e.g., computers at selected laboratories and devices) for the TEL operations. Faculties provide additional technological support for their students related to their requirements in teaching and research.

UPM has been providing suitable applications and software to support teaching, learning and assessment over the years, including the Learning Management system, thesis system, industrial training systems, and student information system.

The LAN and wireless network are provided also for the purpose of supporting T&L. There are some incidents which has caused unfortunate/abrupt disruption such as during assessments, which sometimes caught the instructors off-hand and unhappiness among students.

The university respects the privacy of individual and organisational data/information. An ISO/IEC 27001 Information Security Management System (iSMS) procedure is in place, to ensure security, especially in assessment.

Content Development

Score: 3.75

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

There is no dedicated position as an instructional designer, but the university has several graphic designers. People in this role has been supporting instructors but with limited success. Some instructors in UPM have organically transformed to be excellent instructional designers. In UPM there is an initiative for global online learning called PutraMOOC which targets the development and offering of MOOCs which involve instructors to develop content themselves.

Instructors can create and curate online resources. Many instructors use various online tools for their teaching including an online lab (e.g., for simulation). Guidelines for using online classrooms and e-assessment have been created, distributed, and promoted university-wide.

Various OER has been used and the UPM is moving towards a strong OER initiative. The LMS, PutraBLAST supports external tools and educational resources such as URL, YouTube embedded video, Padlet, Kahoot, etc. The PutraMOOC is an initiative to support OER, in the

form of free and open courses. PutraOCW is an initiative to develop and use open courseware. The university uses Creative Commons licensing for release of its copyrighted materials.

Documentation

Score: 5

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

Various support mechanisms are available covering guidelines, self-tutorials, best practices sharing through webinars, infographics, eLearning community of practitioners at each faculty, ICT helpdesk and training.

Students are supported with tutorials, ICT helpdesk and webinars. There are also administrative staff in each faculty for students to refer to and seek assistance.

The Centre for Academic Development (CADE) shares experiences and information regarding the implementation of TEL within the organisation through discussions, meetings, and presentation. Every year UPM organises a competition for innovative teaching practices where each faculty highlights their best practices in teaching and learning combining face to face and TEL approaches. There is also a carnival for instructors to compete using their innovative teaching approaches. The posters are made available to the public.

Documents that CADe creates (e.g., guides, tutorials, checklists, forms, reports) typically covers workflow processes and responsibilities. The standard practise for any initiative proposal is to explain workflows and responsibilities, followed by a series of engagement sessions. Documents are also distributed through CADe's website, emails, and presentations/meetings. Stakeholders engage as required such as the deans, deputy deans, academic coordinators, academic administrators, technical administrators, MOOC coordinators, eLearning coordinators, and lecturers.

Organisation Culture

Score: 3.5

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

There are various trainings organised by UPM online and face to face related to TEL. Currently around 75% courses are implemented through blended learning implementation throughout the university.

There is a university level committee called the Committee of Innovation in Teaching and Learning (JKIPP), which comprises of two representatives from each faculty. They are the agents for TEL at the faculty. Their scope of work includes sharing and supporting academic members relating to TEL. They usually also communicate with CADe about matters pertaining to TEL developments.

Various organisational platforms are in place for this, such as the Working Committee for Innovation in Teaching and Learning (JKIPP), webinar, community of eLearning enthusiasts, PutraMOOC groups, and faculty level's initiatives. There is also a group of university-funded

researchers conducting research on innovation in teaching and learning. Their output is disseminated for reuse (limited to copyright restrictions).

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.*

Senior management of UPM including the Vice Chancellor and Senate are committed and engaged in TEL related matters. The Self Review Portfolio (SRP) for UPM which is a self-accreditation evaluation includes TEL progress, and it directly monitored by the VC.

The Deputy Vice Chancellor of Academic and Internationalisation (DVCAI) chairs a committee of faculty deans, called Committee of Teaching and Learning (JKPdP). Progress in KPI achievement is reported to the DVCAI quarterly which is then presented in the KPI review meeting.

There are various levels of leaders who contributes to TEL, especially through JKPdP. This committee addresses matters related to teaching and learning, including TEL. New directions and updates pertaining to TEL are also discussed. Since this committee include senior members of each faculty, they strategize matters pertaining to TEL.

Blended learning implementation and innovation in teaching and learning (including usage of MOOC courses) in each course is set as part of instructors' individual annual KPIs. A system called Online Survey Collaborative and Reports (OSCaR) is available for each instructor to monitor their course design according to the blended learning KPI. Reporting of blended learning achievements is presented three times per year to the JKPP.

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 UPM's professional development programmes.*

Various continuous professional development programmes are available and conducted by qualified trainers in and outside of UPM. Trainers are selected based on their expertise and experiences, including their past evaluation score. CPD programmes are conducted throughout the year.

There are various human resources support available for TEL in the Centre for Academic Development (CADE) and the InfoComm Development Centre (iDEC) to provide technical and pedagogic support to the faculty. The Innovation of Teaching and Learning division and CADe (this division mainly champions TEL in UPM) has a technical team to support development of teaching and learning materials. The scope of support covers administration, graphic materials development, instructional design advisory, trainings, guides in the form of check list and guidelines, producing reports for content development progress, and setting up the platform for MOOC. Each faculty also has technical staff who provides support for eContent development. Lecturers are also trained to develop content.

CADe provides support for instructors through training, help desk, clinic, guidelines etc. Instructors could reach out easily to CADe and there is a healthy relationship.

TEL Champions

Score: 4

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.

New staff undergo an induction course which has modules covering TEL. This provides early exposure to them. Early adopters are also seen among lecturers who learn new tools for teaching and learning on their own, or through attending courses provided by CADe. A person may have different levels of competency and interest in the TEL tools. The Working Committee on Innovation in Teaching and Learning (JKIPP) also provides support to develop early adopters. The annual competition in innovation in teaching and learning also encourages development of talents and functions as a platform for knowledge exchange.

There is a university level committee called Committee of Innovation in Teaching and Learning (JKIPP), which comprises of two representatives from each faculty. They are the agents for TEL at the faculty. Their scope of work includes sharing with, and supporting academic members relating to TEL. They usually also communicate with CADe about matters pertaining to TEL developments.

A university funded grant incentive in innovation in teaching and learning is available to support research.

Key Observations from the Report

The overall score of 4.08 on a scale of 5 shows that UPM is well placed to increase the quality of TEL. The TEL benchmarking team at UPM thus has identified several recommendations in the action plan (Annex-C) to make further progress with TEL implementation. However, some key areas that need additional focus are as follows:

- Continuously focus on the policy related TEL to update the same as per the needs.
- The Strategic Plan may also need to further articulate outputs related to TEL and identify responsible units for its implementation.
- Strengthen the skills of ICT support staff to take more responsibilities to support TEL, especially due to rapid developments in the technology fronts.
- Building instructional design of teaching faculty as part of the regular training would further strengthen the use of TEL.
- Teachers engaged in TEL may be provided with further training in innovative course development through adoption of a structured training programme.

Annex-A: The UPM Benchmarking Team

Assoc. Prof. Dr. Nurfadhlina Mohd Sharef	Deputy Director, Innovation in Teaching and Learning	Centre for Academic Development (CADE)
Assoc. Prof. Dr. Juwaidah Sharifuddin	Deputy Dean Academic	Faculty of Agriculture
Assoc. Prof. Dr. Muhajir Hamid	Deputy Dean Academic	Faculty of Biotechnology and Biomolecular Sciences
Assoc. Prof. Datin Dr. Norwati Mustapha	Deputy Dean Academic	Faculty of Computer Science and Information Technology
Prof. Dr. Normala Ibrahim	Deputy Dean Academic	Faculty of Medicine and Health Sciences
Assoc. Prof. Ts. Gs. Dr. Mohd Johari Mohd Yusof	Deputy Dean Academic	Faculty of Design and Architecture
Assoc. Prof. Dr. Adi Yasran Abdul Aziz	Deputy Dean Academic	Faculty of Modern Languages and Communication
Professor Dr. Rumaya Juhari	Deputy Dean Academic	Faculty of Human Ecology
Assoc. Prof. Dr. Radhiah Shukri	Deputy Dean Academic	Faculty of Food Science and Technology
Assoc. Prof. Dr. Nor Azwady Abd. Aziz	Deputy Dean Academic	Faculty of Science
Assoc. Prof. Dr. Soaib Asimiran	Deputy Dean Academic	Faculty of Educational Studies
Professor Ir. Dr. Wan Azlina Wan Abdul Karim Ghani	Deputy Dean Academic	Faculty of Engineering
Assoc. Prof. Dr. Hazilawati Hamzah	Deputy Dean Academic	Faculty of Veterinary Medicine
Assoc. Prof. Dr. Kamziah Abd. Kudus	Deputy Dean Academic	Faculty of Forestry and Environment

Annex-B: Interviews conducted by the Consultant

1. Assoc. Prof. Dr. Barakatun Nisak Mohd Yusof (Deputy Dean's Office), Faculty of Medicine and Health Sciences
2. Assoc. Prof. Radhiah Shukri, Deputy Dean (Academic), Faculty of Food Science and Technology
3. Assoc. Prof. Ts. Dr. Fatimah Binti Sidi, (Director), Infocomm Development Centre (iDEC)

Annex-C: Action Plan

(These are some of the key actions identified by the UPM 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)
Policy					
Continuous quality improvement of TEL policy implementation Development of guidelines if needed	Jan 2022	Dec 2025	Academic Office CADe	TEL policies Committee of Teaching and Learning (JKPdP) Working Committee of Innovation in Teaching and Learning (JKIPP) Committee of Information Technology and Communication	Guidelines will be continuously improvised and new initiatives will be supported by new guideline development from time to time to support practice and implementation of TEL policy.
Strategic Plan					
Transformation of innovative T&L delivery	Jan 2022	Dec 2025	CADe UPM library Academic Admission Office All faculty	Online system for CTM, Micro-credentials, PutraMOOC, Putra i-OER Immersive learning content development environments	<ul style="list-style-type: none"> • 25% of academic programs in UPM has at least 1 course implemented through substitute blended learning • 30-50% of the Faculty in UPM have at least 1 course implementing CTM • 16 PutraMOOC courses are offered for CTM • 5% of students from each PutraMOOC course are awarded a certificate of completion of the course • 100 micro-credentials courses • 100% of the Faculty at UPM have a program to implement virtual immersive learning • 100% of the Faculties at UPM have a program to implement the PutraCGOL method • 8 Faculties in UPM invite external lecturers or appoint UPM lecturers to

	From When (month and year)	By when (month and year)	By who	With what resources (technical and monetary)	Indicators of success (quantify where possible)
					implement Putra e-VF for cooperation between two Universities <ul style="list-style-type: none"> 20% of lecturers from each faculty produce and disseminate at least 1 OER/iOER
2. Align strategic plan of InfoComm infrastructure upgrade with needs for TEL advancements	April 2022	Dec 2025	CADe iDEC UPM library	System stress test Survey of immersive learning applications Survey of innovative learning space needs	All faculties have at least 1 innovative TEL space (equipped with hybrid learning and seamless learning infrastructure, student centered collaborative tools, simulated learning environment - metaverse for usage of augmented reality, virtual reality and mixed reality implementation, usage of IR4.0 applications for T&L) Internet speed of 10Gbps throughout campus
IT Support					
Training and resources for IT support in mainstreaming digitalization in education especially for: (i) hybrid learning and online assessment implementation, and (ii) human resources support for data-driven decision making	Jan 2023	Dis 2025	CADe iDEC	System stress test Survey of immersive learning applications Survey of innovative learning space needs TEL technical support training Educational and learning analytics training	Minimum 1 trained IT support staff specific to TEL activities at the faculty (as EdTech integration coordinator) and execution of TEL clinic sessions. Minimum 2 trained IT staff specific at CADe to cater the development, maintenance and training related to T&L systems. Trained staffs in data analytics for insightful decision making
Strengthening digitalization moves by continuous improvement of IT infrastructure featuring robust and up -to -date server infrastructure in line with the development of ICT technology to ensure (i) security of UPM applications, data and information are controlled, (ii) reliable and wide coverage of internet to support BYOD, and (iii) business intelligence tool	Mar 2023	Dis 2025	CADe iDEC	System stress test UPM Smart Campus Roadmap Exit Survey	High satisfaction level for internet service (collected through Exit Survey). Implementation of UPM Smart Campus planned (e.g., Putra VID, Putra

	From When (month and year)	By when (month and year)	By who	With what resources (technical and monetary)	Indicators of success (quantify where possible)
for data-driven decision making					
Technology Applications					
Cloud-based T&L system that utilizes server and storage infrastructure facilities integrated to support TEL needs, and meets the features of digitization (accessibility, security, tracking, smart) through portals, smartphone applications and QR Codes.	Jan 2022	Dis 2025	CADe iDEC	Putra Learning Hub improvements	<ul style="list-style-type: none"> • Online systems for CTM, micro-credentials, and Putra-iOER • Development of Student Management System 4.0 (with new modules covering global online learning enrolments evidence) • Mobile apps for learning management system • Mobile apps for PutraMOOC • Digital Cockpit Management developed to display information that has been analyzed intelligently (for data from PutraBLAST, PutraMOOC, CTM, Micro-credentials, Putra-iOER)
Content Development					
Implementation of Open Educational Resources (OER)	Nov 2022	Dis 2025	CADe iDEC UPM library All faculty	Content development tools (e.g., Canva, Piktochart) Putra i-OER platform Training Putra InnoCreative Studio	1 inclusive OER for each academic program
Implementation of micro-credentials	October 2022	Dis 2025	CADe All faculty	Micro-credentials development program PutraMOOC platform Micro-credential management system Putra InnoCreative Studio	1 micro-credentials course for each lecturer 1 online course certification for each student upon graduation
Immersive content development environment for augmented reality,	Aug 2022	Dis 2025	CADe All faculty	Immersive learning development environment	Every faculty have Immersive content development environment

	From When (month and year)	By when (month and year)	By who	With what resources (technical and monetary)	Indicators of success (quantify where possible)
virtual reality, and mixed reality applications					
Documentation					
Reporting of innovative delivery in T&L implementation	Jan 2022	Dis 2025	CADe All faculty	PutraMOOC platform Putra i-OER management system Dashboard for courses enrolment and completion	Digital Cockpit Management developed to display information that has been analysed intelligently
Promotion and easy accessibility of T&L documentation	May 2022	Dis 2025	CADe UPM library	CADe's website and social media CADe's Bulletin Faculty's website and social media Webinars	Content registry and indexing of available documentation Digital content view analytics Awareness programs and training to suitable stakeholders
Organisational Culture					
International visibility of PicTL and activities in Bulan Pendidik UPM (UPM Educator Month)	Oct 2022	Dis 2025	CADe PSKK	CADe's website and social media CADe's Bulletin Faculty's website and social media Webinars	Enrolment of 10% foreign participants in PicTL 1 online course certification for each student upon graduation
Culture of online courses as a means of community and industry activities (with or without income)	Nov 2022	Dis 2025	CADe	CADe's webinar platform CTM system PutraMOOC platform	Credit Transfer MOOC system More than 2% enrolment of international participants in webinars
Leadership					
Prioritising TEL for innovative delivery in T&L	Jan 2023	Dis 2025	CADe Human Resource	Committee of University Curriculum (JKKU)	<ul style="list-style-type: none"> Minimum 1 course in each program implementing flexible curriculum (e.g.,

	From When (month and year)	By when (month and year)	By who	With what resources (technical and monetary)	Indicators of success (quantify where possible)
			Development Division, Registrar Office	Transformative Curriculum	through CTM) <ul style="list-style-type: none"> • Minimum 1 online course certificate (e.g., PutraMOOC, Micro-credentials) for each student upon graduation • Recognition to TEL leaders by formalizing appointments and reporting of activities at faculty level
TEL-empowered competencies among senior, middle and leaders	Jan 2023	Dis 2025	CADe Human Resource Development Division, Registrar Office	CBT-TnL program	TEL leadership competency certification recipients in UPM
Human Resource Training					
Continuous professional development for TEL reskilling and upskilling	Jul 2022	Dis 2025	CADe Human Resource Development Division, Registrar Office	CBT-TnL program CADe's webinar platform	<ul style="list-style-type: none"> • Implementation of courses in CBT-TnL and certified educators in: • instructional design • academic integrity • TEL competency • scholarship in TEL
Trained staffs for instructional design	July 2022	Dis 2025	CADe All faculty	Putra Innovation Studio Content development tools	<ul style="list-style-type: none"> • Minimum 2 trained staffs for immersive learning content creation at CADe • Minimum 1 trained educator for immersive learning content creation at each faculty • Minimum 1 instructional designer at each faculty
TEL Champions					
TEL Champions as a transformation agent at faculty, university, national and international level	Jan 2023	Dis 2025	CADe Human Resource Development Division, Registrar Office	CBT-TnL program Vice Chancellor Fellowship Award	<ul style="list-style-type: none"> • Leadership program for TEL champions • Recognition of TEL leadership for career development • Upscaling of T&L innovations and best practice sharing on innovative T&L approaches • Intellectual property for innovation in T&L



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