Report of the Benchmarking of Technology-Enabled Learning at Universiti Pendidikan Sultan Idris

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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 Pendidikan Sultan Idris (UPSI) is one of the six universities identified by the MOHE. The other universities are:
- Universiti Malaya
- Universiti Kebangsaan Malaysia
- Universiti Putra Malaysia
- Universiti Teknologi PETRONAS
- Universiti Teknologi Malaysia.

Universiti Pendidikan Sultan Idris (UPSI) is a public university in Malaysia committed to "… bring changes in education by spreading knowledge through teaching and learning, research, publication, negotiation, and community service in the context of human capital development excellence in the domestic and international level."

Its vision is "To be a prestigious university providing exceptional leadership in education, based on the advantage of broad experience and high level of competency in meeting global changes." And its mission is "To generate and foster knowledge through teaching, research, publication, consultancy and community services to achieve the vision of the nation". UPSI has just over 20,000 degree-students and just over 3500 diploma-students enrolled.

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

Process and Methods

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

UPSI nominated 11 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 UPSI, 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 UPSI 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 UPSI, 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

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[1] http://oasis.col.org/handle/11599/3217

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.

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 UPSI

Policy	Score: 4

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.

UPSI has developed and documented an E-Learning Policy to specify the implementation of e-learning initiatives in UPSI for increasing the teaching and learning offered in undergraduate and post-graduate programmes. The policy is designed and developed to align with the national policies such as Dasar E-Pembelajaran Negara (Malaysia National E-Learning Policy, DePAN) and Malaysia Education Blueprint 2015-2025 (Higher Education). In UPSI, the TEL plan and implementation is governed by Academic Development Centre (PPA) which has two departments, including e-Learning affairs.

The UPSI E-Learning Policy includes the implementation of conventional learning, e-learning, and blended learning for all courses in UPSI. The policy is aligned with the mission of UPSI in enhancing the teaching and learning ecosystem in UPSI.

The UPSI E-Learning Policy refers to multiple departments across UPSI including the Academic Development Centre (PPA), ICT Centre (PICT), a total of nine faculties in UPSI, and various departments in supporting the e-learning initiatives in UPSI.

Strategic Plan	Score: 3.25

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

UPSI develop its strategic plan as a consultative process and follows the performance target set by MOHE. The current Strategic Plan is for 2021-2025 and is currently being implemented university wide.

Reporting on the success and achievements of the strategic plan is carried out quarterly through UPSI Strategic Plan 2021 - 2025 is evaluated through: a) 6 Strategic Objectives; b) 19 Key Performance Indicators; and c) 216 Performance Indicators. Three key performance indicators (KPIs) for UPSI are related to blended learning and MOOCs.

The provision of resources (finance, human resources, ICT, infrastructure, and other related resources) is implemented in accordance with the procedures and regulations in force and reviewed annually according to the progress of implementation and performance against the strategic plan.

IT Support	Score: 4

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

The ICT Centre (PICT) of UPSI has a complete Strategic Plan for ICT to ensure the appropriateness of ICT infrastructure (i.e., software, hardware, networking, and data storage services) towards UPSI's digitalization initiative. While there is ICT policy, due to fast-changing in TEL demands, there is a need to bridge the gap between policymaking and technology.

The Director of the ICT Centre is also involved in the e-Learning Committee Meeting. The chairperson for the meeting is the Deputy Vice Chancellor (Academic and International).

Reports from all meetings are discussed and endorsed by the UPSI Management Team led by the Vice Chancellor.

The ICT Centre handles all the ICT services including supporting TEL initiatives. Besides having a clear ICT Policy in UPSI, the centre also works in-line with the Academic Development Centre (PPA) to ensure high performance on e-learning (National E-Learning Policy, DePAN) and report to the MOHE of Malaysia.

The highest central high-powered committee to oversee the ICT policy is the e-University Committee Meeting which is chaired by the Deputy Vice Chancellor (Research and Innovation) and report to the Vice Chancellor and UPSI Board of Directors.

The Director of the ICT Centre is well qualified for this role.

Technology Applications	Score: 4

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

The hardware infrastructure for teaching and learning is adequate with access to computer labs, the micro-teaching lab, and education technology and other hardware such as a high-quality camera and graphic tablets for students to use for learning purposes. Every semester, students do a learning evaluation survey which also relates to their satisfaction on the teaching and learning infrastructure.

Software and application for teaching and learning are adequate including the Learning Management System (LMS) known as MyGuru, UPSI-MOOC platform and University Integrated Management System (UIMS) for students, lecturers, and support staff.

Currently, the Internet services provide full coverage throughout the UPSI campus and student residence with a maximum of 10 Gbps. Aligned with the UPSI Strategic Plan for 2021-2025, there are plans to increase speed and Internet accessibility to 15 Gbps in the next five years.

A policy dedicated to protecting privacy and organisational data has been designed and implemented known as the ICT Security Policy. Guidelines for social media usage and practices has also been developed and is being used by students, lecturers, and support staff.

Content Development	Score: 3.75

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

A Teaching, Learning, Assessment, and Supervision Policy (TLAS) was developed by the Academic Development Centre (PPA) and Human Resource Division for all lecturers. There is a dedicated support team from the ICT Centre and Academic Development Centre (PPA).

Instructional design support is provided by the Academic Development Centre (PPA) for UPSI-MOOC platform and ICT Centre for MyGuru platform. Also, there are instructional design skill

distributed around the university departments. Teachers have access to Teaching, Learning, Assessment and Supervision (TLAS) including Open Educational Resources (OER) and MOOC courses.

There is an openness and willingness to use OER with a KPI related to MOOCs in 2021 being one MOOC per faculty.

Documentation	Score: 3.25

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

UPSI provides several platforms to support the use of technology in the teaching by lecturers, namely MyGuru which is a complete LMS. MOOCs at UPSI are used to support e-pedagogy and e-content. In addition, UPSI also has a YouTube Channel and a social media (Facebook, Instagram and others) presence. Online materials are also supported by the library by providing online resources, such as e-books, e-thesis, e-journals, and e-databases.

There is widespread usage of free software such as Google Classroom/ Telegram/ YouTube/ Instagram/ Facebook and others. UPSI also subscribes to WEBEX and Google Meet as well as Virtual Desktop Infrastructure (VDI).

UPSI has improved communication as well as facilitated the dissemination of information, sharing of materials, sharing of knowledge both within and outside the university. This also increases innovation in teaching and learning among lecturers and students.

The workflow processes and responsibilities to implement TEL are documented by different departments in UPSI. Mostly by the Academic Development Centre (PPA) and ICT Centre, which cover guidelines for Blended/Hybrid Learning, smart classroom, etc.

Organisation Culture	Score: 4

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

Faculty and staff members are willing to learn about new teaching and learning technology, as they actively participate in training programmes provided by the university.

Faculty and professional (or general) staff members support each other in using technology in teaching and learning for development of online courses. A good level of knowledge creation and sharing across the organisation are evident through regular Webinar by the faculty members.

Innovations to enable learning with technology are fostered in the organisation through the LMS and MOOC. There is also an incubator lab and a therapy and support service lab in the university to support students.

Leadership	Score: 3.75

Description: Leaders in the organisation are enthusiastic about TEL and support an evidence-

based approach to decision making in relation to technology adoption.

UPSI leaders including UPSI Board of Directors show their commitment to use technology to achieve strategic academic goals. UPSI top management always encourage the implementation of TEL through their presentations especially about the UPSI Digitalisation Initiatives. The UPSI top management members are chairpersons of several committees such as the e-University Committee Meeting, ICT Steering Committee Meeting (JPICT), and e-Learning Committee Meeting.

The three meetings mentioned above also involve the Deans from the nine faculties and directors from respective departments including the Academic Development Centre, ICT Centre, and the library. All meetings occur four times a year and the outcomes of the meetings are discussed and approved by the UPSI Management Team and the Board of Directors.

The HR Division released a Mentoring Program for senior leaders or lecturers to support and encourage the young lecturers in the use of TEL. The information is disseminated through a platform known as Expert@UPSI.

| **Human Resources Training** | **Score: 3.83** |

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 UTP's professional development programmes.

All lecturers must fulfil the TLAS courses before end of 2023 for TEL training. Due to the Covid-19 pandemic, the implementation of TLAS courses has been shifted to a MOOC platform for wider coverage and personalized learning among lecturers. UPSI also has a Training and Professional Human Resource Development Policy as the main reference for organising and implementing training development for all UPSI staff in order to achieve the vision and mission of UPSI.

TLAS will continue beyond the middle of 2022. This show that the information and skills on the use of TEL is gradually increasing with different methods and techniques from internal and external experts.

The number of staff supporting TEL is moderate but due to the high demand and need to support TEL adequate and competent staff should be provided.

| **TEL Champions** | **Score: 3.5** |

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 TEL champions in the organisation who support and care about pedagogic innovations. Some teachers take active leadership roles in developing appropriate TEL strategies and policies in the organisation. Theya re also involved at national level in Malaysian e-Learning Council for Public Universities (MEIPTA) as a member.

UPSI created an Academician Award (A2U) and Service Excellence Award (APC) to recognize and praise the academics who have made the university proud in various fields of knowledge including in implementing TEL initiatives. UPSI has incorporate innovative teaching attributes in the annual performance appraisal (LNPT), and recently included TEL and teaching delivery strategies.

There are TEL champions who actively research and disseminate good practices in TEL.

Key Observations from the Report

The overall score of 3.78 on a scale of 5 shows that UPSI is well placed to increase the quality of TEL. The balanced radar chart indicates that most areas at UPSI are aligned for optimising TEL. The TEL benchmarking team at UPSI thus has identified several recommendations in the action plan (Annex-C) to make further progress with TEL implementation. There is also strong buy-in to these from the senior management. However, some key areas that UPSI may need to focus are as follows:

- Create a special taskforce committee to monitor the performance of Strategic Plan 2021-2025 (UPSI Strategic Planning) to ensure the effectiveness and sustainability of the implementation technology-enabled learning.
- Develop a career path for TEL champions to take a professional certification such as Google Certified Educator, Adobe Certified Professional, Microsoft Innovative Educator, Apple Distinguished Educators, or any related professional certification. There are many open courses available at Commonwealth of Learning that can also be leveraged to offer training at UPSI.
- Build a recognition and mentoring plan for increasing number of special interest group in teaching and learning including strengthening and creating new pedagogy approach.
- Strengthen the use of OER in course development by teachers.

Annex-A: The UPSI Benchmarking Team

Associate Professor Dr. Abdul Rahim bin Razalli	Dean, Faculty of Human Development
Associate Professor Dr. Mazura @ Mastura binti Muhammad	Dean, Faculty of Language and Communication
Associate Professor Dr. Mohd Asri bin Mohd Noor	Dean, Faculty of Business and Economy
Associate Professor Dr. Raja Nor Safinas binti Raja Harun	Dean, Post Graduate Institution
Associate Professor Dr. Arasinah binti Kamis	Director, Quality Management Division
Associate Professor Dr. Azmi bin Mohamed	Director, Corporate Planning Division
Associate Professor Dr. Mohd Izwan bin Shahril	Director, Corporate Communication Division
Associate Professor Dr. Maizatul Hayati binti Mohamad Yatim	Director, Academic Development Centre
Mrs. Mahanum binti Muhammad	Deputy Registrar, Human Resource Division
Mrs. Norazizah binti Othman	Director, ICT Centre
Dr. Suhazlan Suhaimi	Deputy in the Academic Development Centre.

Annex-B: Interviews conducted by the Consultant

1. Prof. Dr. Marzita Puteh, DVC (Academic and International).
2. Associate Professor Dr. Azmi Mohamed, Director, Strategic Department.
3. Associate Professor Dr. Maizatul Hayati Mohamad Yatim, Director, Academic Development Centre.

Annex-C: Action Plan
(These are some of the key actions identified by the UPSI 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. Revise the **UPSI E-Learning Policy** in accordance with current demands and technology changes in conjunction with MOHE initiatives.	May 2022	June 2022	Academic Development Centre (PPA)	Nil	Policy endorsed by Senate and University Management Committee
b. Revise the **Academician Workload Policy** to align with the TEL preparation and implementation.	May 2022	Sept 2022	Human Resource Division Academic Development Centre (PPA)	Nil	Policy endorsed by University Management Committee
c. Develop a master plan on **UPSI Digitalization Policy and Roadmap Dashboard** including teaching and learning, research and innovation, digital talents among students and staffs, conducive digitalization ecosystem, TEL governance, financial management and UPSI's income generation, and lastly TEL quality assurance and auditing.	May 2022	June 2024	Strategic Department ICT Centre	Nil	Policy endorsed by University Management Committee
d. Revise **the ICT-related policies** to bridge the gap between policymaking and technology because of the fast-changing in TEL demands and due to migration process.	May 2022	Dec 2022	ICT Centre	Nil	Policy endorsed by University Management Committee
e. Advocate for TEL availability of and access to Internet connection aligned with the **ICT Security Policy** in UPSI.	May 2022	Sept 2024	ICT Centre Academic Development Centre (PPA)	Estimates RM 1.8 million in five years	Speed and accessibility bandwidth (15 Gbps)
f. Improve the **policy of OER** to support T&L.	May 2022	June 2023	Academic Development Centre (PPA)	Nil	Policy endorsed by Senate and University Management Committee
g. Revise the **Academic Performance Appraisal Policy** to align with the TEL preparation and implementation.	May 2022	Dec 2022	Human Resource Division	Nil	Policy endorsed by University Management Committee
B. Strategic Plan					
a. Create **a special taskforce committee** to monitor the performance of PSUPSI 2021-2025 (UPSI Strategic Planning) to ensure the effectiveness and sustainability of the	May 2022	Sept 2022	Strategic Department	Nil	Policy endorsed by University Management Committee

		From When (month and year)	By when (Month and year)	By who	With what resources *(technical and monetary)*	Indicators of success (Quantify where possible)
	implementation of PSUPSI 2021-2025 including the TEL policy.					
C.	**IT Support**					
a.	Strengthen the **development of ICT infrastructure and application** aligned with the National e-Learning Policy (DePAN).	May 2022	Sept 2023	Academic Development Centre (PPA)	Nil	Monitoring on DePAN achievement
b.	Prepare **a dedicated TEL funding** for new TEL implementation such as micro-credential projects and additional hybrid classrooms.	May 2022	Dec 2024	Academic Director Bursary	Estimates RM 1-2 million every two years	Budget approval (in-line with UPSI's income generation).
D.	**Technology Applications**					
a.	Provide students, lecturers and supporting staffs with **relevant software** for teaching and learning (including assessment software tools and plagiarism detection software).	May 2022	Dec 2023	ICT Centre	Estimates RM 1-2 million every two years	Budget approval (in-line with UPSI's income generation).
b.	Provide a special mechanism for **hardware and software ownership** such as device or money loans or rewards.	May 2022	Dec 2023	Bursary	Estimates RM 1-2 million every two years	Budget approval (in-line with UPSI's income generation).
E.	**Content Development**					
a.	Increase the number of **MOOC, e-courses, and MC** program.	May 2022	Dec 2024	Academic Development Centre (PPA)	Estimates RM 30 thousand every year	Increase number of courses or programs
b.	Hire one **digital content designer** or **instructional designer** for each faculty.	May 2022	Dec 2024	Human Resource Division	Emolument per position	Increase number of courses or programs
F.	**Documentation**					
a.	Prepare **a comprehensive open access repository** to store all TEL-related or non-TEL policy and guideline files, as well as a log system for changes history made to those files.	May 2022	Dec 2024	Governance Unit	Nil	A ready-to-use repository
G.	**Organisational Culture**					
a.	Create more **manuals** (written or in video format) and **guidelines** on the usage of software, lab, and/or instructional procedures.	May 2022	Dec 2022	Academic Development Centre (PPA)	Nil	Increase number of manual/guidelines/policies.
b.	Nurture **digitalization culture** for TEL in UPSI by giving authorization for all staff and students to nurture knowledge creation, knowledge sharing and flexibility in organisation.	May 2022	Dec 2023	Human Resource Division, Academic Development Centre (PPA)	Nil	Number of workshops, webinars, or training program.