2025 Trend Report

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Directions for ASEAN-ROK Cyber University Cooperation: A Strategy for Shared Growth in the Era of Digital Transformation

Taewan Kim / Office of Planning, Busan Digital University

This column is based on Busan Digital University's participation in the ASEAN Cyber University projects (2016–2025) supported by KERIS, presenting a case study of sustainable ASEAN-ROK collaboration in the field of online higher education.

Introduction : A New Chapter in ASEAN-ROK Higher Education Cooperation

Digital transformation is fundamentally reshaping the structure and purpose of higher education. As learning formats, accessibility, and institutional networks increasingly shift online, the need for a shared platform that can reduce educational disparities and promote mutual growth among nations has become ever more important.

The ASEAN Cyber University (ACU) project, initiated at the 2011 ASEAN-ROK Summit, represents an innovative model designed to enable Korea and ASEAN countries to realize "growth through connection." Since 2016, the project has been overseen by the Korea Education and Research Information Service (KERIS) to strengthen the e-learning capacity of ASEAN universities.

More than a simple effort in technology transfer or content provision, ACU has evolved into an experimental platform for co-planning, co-operation, and co-evaluation in higher education. Its goal is to build a sustainable ecosystem in which institutions with diverse educational environments can share resources, experiences, and learning outcomes to advance together through digital collaboration.

Busan Digital University's Stepwise Collaboration

Among Korea's participating institutions, Busan Digital University (BDU) has established one of the longest-standing and most structured partnerships within the ACU initiative.

2016–2019:
Through the ASEAN e-Learning Support Project, BDU supported Myanmar's University of Information Technology (UIT) and University of Technology (UT) by providing online content development, faculty training, and LMS consulting. This foundational phase strengthened Myanmar's online education capacity and marked the first stage of ACU's approach: building the infrastructure for sustainable digital learning.

2023:
In collaboration with UIT in Myanmar and the Institute Aminuddin Baki (IAB) in Malaysia, BDU jointly operated the course "Big Data Processing." Approximately 200 Malaysian education officers participated, learning practical models for data-driven educational administration. This initiative expanded ACU's cooperation beyond higher education and into the public education sector.
2024:
BDU and UIT jointly offered "Big Data Planning and Analysis," with a focus on student-centered data practice and applied analysis. The course localized Korean-developed online materials for ASEAN learners, demonstrating the feasibility of localized joint operations.
2025:
BDU, UIT, and University of Computer Studies, Yangon (UCSY) co-operated on the course "Big Data Use Cases." The course adopted a time-shifted joint operation model that utilized both BDU's institutional LMS and the ACU-LMS.

BDU first conducted the course on its own LMS, accumulating learning data and instructional experience. This prior experience then served as a reference and advisory resource for Myanmar universities as they implemented the same course later through the ACU-LMS. In particular, BDU provided feedback and consultation during the implementation of the Mini Capstone Project, allowing partner universities to adapt the activity smoothly to their own academic calendars.

This model enabled the same course to be offered sequentially rather than simultaneously, thereby maintaining educational consistency while respecting institutional differences. It provided a practical and realistic model for international joint education, one that acknowledges and accommodates variations in academic schedules and systems across countries.

Learner-Centered Outcomes : The Mini Capstone Project

The most distinctive feature of the 2025 joint course was the Mini Capstone Project, a collaborative, data-driven learning activity involving students from all three universities.

A total of 108 students—63 from UIT, 35 from UCSY, and 10 from BDU—responded to a ten-item common survey examining "the impact of digital transformation" and "the application of AI and Big Data in various fields."

The analysis revealed both diversity and commonality in student perceptions. Learners from Myanmar emphasized public and social problem-solving fields such as healthcare, environment, and public administration, while BDU students focused more on industry-oriented fields such as welfare, distribution, and service sectors. Across all three universities, however, AI–Big Data convergence was identified as the most critical learning theme, while data ethics and privacy protection were recognized as shared challenges.

Importantly, students were not passive respondents. They collectively reorganized and visualized the survey data online, interpreting and comparing their findings with peers from other countries. Through this activity, data analysis became a process of communication and reflection, prompting discussions on how digital transformation is reshaping their respective societies.

The Mini Capstone Project thus served as a model of participatory, cross-border learning, in which students developed data literacy, intercultural understanding, and a shared awareness of social responsibility in the digital age.

Implications and Future Directions

The essence of the ACU initiative lies not in one-way educational assistance but in building a cooperative structure for mutual academic growth. BDU's experience demonstrates how universities can go beyond content delivery to develop practical frameworks for shared online education, integrating faculty collaboration and data-informed learning improvement.

Future ASEAN-Korea cooperation can be further strengthened in three directions:

First, enhance the joint course operation system centered on the ACU-LMS. The platform should serve as the foundation for sharing teaching resources, operational know-how, and learning data in order to continuously improve instructional quality.

Second, establish AI and Big Data–based learning analytics systems to support ongoing teaching and learning improvement. By analyzing participation rates, assignment performance, and assessment data, universities can refine course design and feedback processes to enhance learning effectiveness.

Third, expand faculty development and region-specific digital literacy training. Joint content development and instructor exchange programs should reflect local social and industrial contexts, fostering sustainable collaboration and capacity building.

These directions focus on educational enhancement and faculty cooperation rather than large-scale policy restructuring. The long-term sustainability of ACU will depend on improving learner experience and reinforcing continuous faculty collaboration across partner institutions.

Conclusion : Toward Shared Learning and Growth

Over the past decade, the ACU project has proven the potential of ASEAN-Korea collaboration in higher education. Busan Digital University has evolved from a content provider into a collaborative partner, establishing a sustainable model of international joint education through shared practice.

In the era of digital transformation, higher education can no longer remain confined within national boundaries. Universities must act as partners in "learning and growing together," narrowing educational gaps and expanding the social value of knowledge. The ASEAN-Korea Cyber University partnership stands as one of the most practical and forward-looking platforms driving this change, and it will continue to serve as a core engine for balanced regional development and human capacity enhancement.



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Monthly Issue

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Appreciation Note

As we wrap up another successful year, we would like to express our heartfelt appreciation to all our readers for their steadfast support of ACU Magazine throughout 2025.

Your continued interest and encouragement have been the driving force behind ACU's growth and innovation.

Thank you for being part of our journey and we look forward to welcoming you back in the coming year, with even more insightful articles and meaningful engagements ahead!

ACU Experience Essay Contest Winners Announcement

As previously announced, we are pleased to present the winners of the "ACU Experience Essay Contest." We extend our sincere gratitude to all participants who shared their valuable reflections and experiences with ACU. Prizes will be distributed to the winners via the email addresses provided upon submission. Now, please join us in celebrating the outstanding work of our winning contributors!



ACU Experience Essay Contest Winners

Felicia Ivanna Widian / Maranatha Christian University
Dr. Lwin Nyein Thu / University of Computer Studies (Taungoo)
Prastika Ramadhani, Amelia Putri Wulandari, Putri Catur Kusumaningtyas and Fina Nidha Ulmu Fida / UPN Jawa Timur (Indonesia)
Sakinah, Deliana Nurfauziyyah Aminallah and Hamizatul Hardiantati / UPN Jawa Timur (Indonesia)
Thant Kyi Phyu / University of Technology (Yatanarpon Cyber City)
Valentino Hose / Maranatha Christian University
Gearald Christoffer Freederich / Maranatha Christian University
Wilfridus Bambang Triadi Handaya / Atma Jaya Yogyakarta University

Building Cross Cultural Education

Felicia Ivanna Widian / Maranatha Christian University

The ASEAN Cyber University initiative represents a model of international digital learning that integrates educational technology with intercultural collaboration. Through participation in ACU LMS and KOCW, it becomes clear that these platforms are not only tools for content delivery but are also designed to cultivate intellectual maturity, global awareness, and academic responsibility. They emphasize the importance of learning as a collective academic process that is relevant to the current demands of regional and global cooperation.

ACU LMS provides an organized and academically structured learning environment that supports self regulated study. The instructional materials are presented through lecture videos, downloadable modules, and online assessments or even quiz that require consistent engagement from the learners. Beyond content comprehension, the discussion forums allow students to express national perspectives on regional issues such as digital transformation, education policies, and socio economic challenges within ASEAN countries. This transforms the learning environment into a reflective academic space, where ideas are evaluated not only for personal understanding but also for regional relevance.

The platform implicitly trains students in academic discipline. It encourages independent planning, critical reading, and systematic information processing. Technical challenges such as unstable internet connection or unfamiliar platform navigation occasionally appear, yet these challenges indirectly strengthen academic persistence and problem solving ability. In a broader sense, ACU LMS does not merely transfer knowledge but also prepares learners for scholarly behavior in higher education and research settings.

KOCW complements this experience through academically rich courses from Korean universities. The lessons are not limited to theoretical explanations but are linked to real world cases that involve culture, technology, innovation, and educational reform. Each module requires students to interpret how Korean academic perspectives could be adapted to ASEAN contexts. This encourages analytical comparison, contextual adaptation, and awareness that educational solutions are shaped by cultural and national frameworks.

The reflective components in KOCW assignments play a crucial academic role. Students are not asked to memorize concepts but to evaluate them, reinterpret them, and articulate their relevance to their own local realities. This promotes higher order thinking such as analysis, evaluation, and synthesis which are key intellectual competencies in university level learning. It also nurtures cultural intelligence by allowing students to recognize both similarities and differences in how societies approach development and innovation.

In conclusion, the combined use of ACU LMS and KOCW demonstrates an advanced approach to international education. It does not merely provide online lectures but fosters academic maturity, ethical collaboration, and intercultural understanding. The program prepares students to view education as an intellectual responsibility toward collective progress rather than a personal pursuit. It reflects the future direction of global higher education, which emphasizes knowledge exchange, cultural sensitivity, and collaborative problem solving.

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Transforming My Perspective Through Digital Transformation

Dr. Lwin Nyein Thu / University of Computer Studies, Taungoo (UCS-Taungoo)

Firstly, I would like to introduce myself and provide a brief overview of my professional background. I am Ms. Lwin Nyein Thu, Ph.D(IT), an Associate Professor from the Faculty of Computer Science (FCS), University of Computer Studies, Taungoo (UCS-Taungoo), Taungoo Township, Bago Region, the Republic of the Union of Myanmar. As an educator, researcher and lifelong learner, I always seek opportunities to expand my knowledge and remain engaged with the emerging trends in the field of Information Technology (IT). Therefore, enrolling in the "Digital Transformation: Industry Applications and Insights" course from the Open Cyber University of Korea, ACU-LMS or KOCW via ACU (ASEAN Cyber University) Platform, has been one of the most enriching and transformative academic learning experiences in my professional journey with ACU.

Over the course period from September 15th to November 17th, 2025, the advanced seminar-style lecture introduced me to the concept of digital transformation – not only just as a technological trend, but also as a driving force reshaping every industry. Moreover, this advanced seminar invited top industry experts to share both theory and real-world cases of the digital transformation across the following diverse fields (six key sectors) including Healthcare, Green Transformation, Passenger/Logistics, Smart Factory, Robotics, and Finance. Through these sessions, I gained an in-depth understanding of how major domestic and global companies utilize "AI-based innovative technologies" to reshape industries and enhance efficiency, sustainability, competitiveness and customer experience. I was fascinated by how digital transformation creates connections between seemingly unrelated sectors and how these convergences drive innovation in the modern economy.

Through ACU-LMS and KOCW, I engaged with rich multimedia resources and case studies that strengthened my understanding of the latest ICT and generative AI technology trends. More importantly, the course greatly improved my ability to analyze, plan and propose digital transformation strategies while sharpening the problem-solving skills through sector-specific examples. In addition, I also learned to think critically assess the applicability of digital transformation and innovation in either the global or the ASEAN markets, an insight that is invaluable for both teaching and research.

This experience has not only enhanced my academic knowledge but also transformed how I perceive the future of industries. On the other hand, the lectures reaffirmed that *"digital transformation is not merely about adopting technology – it is about reimagining value, creation, collaboration, and human potential"*.

Consequently, I am deeply grateful to the ACU for providing such a learning platform that bridges theory with industry practice. This experience has also truly inspired me to guide the students and colleagues toward embracing innovation in a digitally transformed world where learning meets real-world relevance to become part of the next generation of digital innovators.

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Learning Without Borders: How ACU-LMS Opens Doors to Knowledge and Connection

Prastika Ramadhani, Amelia Putri Wulandari, Putri Catur Kusumaningtyas and Fina Nidha Ulmu Fida / UPN Jawa Timur (Indonesia)

When ACU-LMS (ASEAN Cyber University – Learning Management System) was first introduced in class, we didn't have particularly high expectations. We thought it would be just another e-learning platform, mainly used to download materials and submit assignments. However, after several sessions exploring the menus and features provided in ACU-LMS, we discovered how versatile the platform actually is. We realized that it is not merely a space for online learning, but also a bridge that connects students across universities and even across countries.

One of the most remarkable features of ACU-LMS is its course archiving system. All materials from previous semesters are neatly stored and can be accessed anytime. This feature is especially helpful for final-year physics students like us, who often need to revisit fundamental concepts from earlier courses for research or final projects. For instance, when reviewing semiconductor principles and energy bands from Quantum Physics and Basic Electronics, or recalling crystal lattice theory from Solid State Physics, we no longer need to search through old files on our personal devices. Everything is already organized within the system.

Beyond serving as an academic reminder, these archives also support the continuity of learning. They allow us to see how our understanding has grown, how topics that once felt confusing now seem much clearer and more meaningful over time.

More than that, exploring these archived courses has sparked our curiosity to delve into topics that we haven't yet encountered in our curriculum. Several courses unavailable in our study program can be accessed through ACU-LMS, such as Physics of Colloid and Hydraulics, both of which are closely related to our field. This opportunity allows us to expand our knowledge and strengthen our understanding of physics in a more applied context. Access to such courses also adds value by helping us connect theoretical concepts learned in class with their real-world engineering and technological applications. Thus, ACU-LMS has become aligned with academic and professional needs.

Joining ACU also opens up opportunities to explore subjects that support our studies but are not listed in our curriculum. As physics students, we often need to understand engineering-related aspects to fully apply the theories we learn. Through ACU, we can access engineering courses that complement our understanding of physical principles. For example, in Manufacturing System, we can learn about industrial manufacturing processes that are not discussed in detail in our own classes. Although this course belongs to the field of engineering, we can still access and benefit from its materials.

In addition to broadening our interdisciplinary perspective, the use of English in ACU-LMS materials provides another advantage. It not only helps us understand scientific terminology more universally but also enhances our academic communication skills in an international learning environment.

Through ACU-LMS, we have learned that education is no longer confined by geographical or institutional boundaries. The platform encourages us to stay curious and continuously seek knowledge by exploring, revisiting, and connecting ideas across disciplines and cultures. As physics students, this experience not only supports our academic growth but also expands our social network with students from various universities and countries. ACU-LMS has shown that accessible learning can transcend existing limitations and foster a more inclusive academic environment.



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ACU-LMS : A Bridge Connecting Voices, Cultures, and Dreams Across ASEAN

Sakinah, Deliana Nurfauziyyah Aminallah and Hamizatul Hardiantati / UPN Jawa Timur (Indonesia)

When we first heard about the ASEAN Cyber University Learning Management System (ACU-LMS), we were curious — how could an online platform possibly recreate the energy of learning together in a classroom? A few months later, after joining our first ACU-LMS courses, we found the answer: it doesn't just recreate that experience — it redefines it.

As physics' students from Indonesia, we've always associated learning physics with labs, equations, and hands-on experiments. But using ACU-LMS has shown us that digital learning can be just as engaging — sometimes even more so. The platform gives us access to interactive modules, discussion forums, quizzes, and multimedia resources that make learning feel dynamic and alive. Through ACU-LMS, we've joined online courses taught by lecturers from various ASEAN partner universities. The topics are exciting and relevant — from renewable energy and green technology to digital innovation and sustainability. Each course doesn't just deliver information; it invites us to collaborate, discuss, and think critically. We've learned that science is not just about experiments in the lab — it's about understanding global issues and working together to find solutions.

What we love most about ACU-LMS is how it brings students from different countries into one shared learning space. Even though our interactions happen virtually, the sense of connection is real. We've exchanged ideas with friends from Malaysia, the Philippines, Thailand, and Vietnam, discovering how each of us approaches science in unique ways. Those conversations have made us more open-minded, adaptable, and appreciative of the diversity that defines ASEAN.

The platform itself is easy to navigate and flexible — we can study anytime, anywhere, which fits perfectly with our routines as digital-native students. Whether we're reviewing materials late at night or joining a morning discussion from the campus café, ACU-LMS gives us the freedom to learn at our own pace while staying connected to the larger academic community.

But more than just a digital tool, ACU-LMS represents a new way of thinking about education. It's not limited by borders or time zones. It encourages collaboration, creativity, and mutual respect. It helps us develop not only technical knowledge but also essential soft skills — communication, teamwork, and cultural awareness — that are crucial for the global workplace.

Through this experience, we've realized that learning is no longer confined to a physical classroom. The "classroom" now spans across Southeast Asia — a region full of voices, ideas, and shared dreams. And in that shared space, powered by ACU-LMS, we're not just learning physics; we're learning how to be part of something bigger — a community of young thinkers who believe in the power of knowledge to connect and inspire.

For us, ACU-LMS isn't just a platform. It's a bridge — between universities, between cultures, and between dreams.



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Learning Experience with ACU-LMS via ACU

Thant Kyi Phyu / University of Technology (Yatanarpon Cyber City)

I am a computer engineering student at the University of Technology (Yatanarpon Cyber City), commonly known as UTYCC, in Myanmar. UTYCC is one of the member universities of the ASEAN Cyber University (ACU), that provides students more chances to access advanced learning resources and online programs. Because of partnership between UTYCC and ACU, UTYCC students have access to valuable courses and resources and being part of this university has allowed me to explore many new areas of technology, especially through the ACU LMS Learning Center. ACU has played an important role in my learning journey from my first year up to now.

When I joined UTYCC initially, I felt a little nervous because everything was new to me. In my first year, I studied Introduction to Computer System (ICS) through the ACU LMS. This was my first experience using an online learning platform. At the beginning, I didn't fully understand how the LMS worked, but soon I became familiar with LMS. The ACU LMS was very convenient because I could access lessons anytime and anywhere, which helped me review difficult topics. I learned about basic computer components, IO devices, storage systems, and how the CPU processes information. The videos and reading materials made the lessons clear and interesting. I still remember the moment I finally understood how software and hardware communicate and it gave me confidence that I could really study computer engineering.

In my second year, I continued learn Java Programming with the ACU LMS. This subject was more challenging cause it required logical thinking and problem solving skills. As I am not good at thinking critically, I spent long hours practicing code, fixing errors, and reading tutorials. Sometimes my code didn't work even though I thought everything was correct, and that made me upset. But I learned to never give up easily. The ACU LMS made it easier to practice because it provided coding exercises, quizzes, and lecture notes that I could repeat until I understood.Slowly and slowly. I became more confident in writing Java programs. I learned about variables, loops, functions, and OOP concepts.

In my third year, I learned Cyber Security through the ACU LMS, and this subject truly inspired me because I am so interested in Networking and Cyber Security. The ACU LMS provided detailed lectures on topics like encryption, firewalls, and ethical hacking. I learned how attack systems work and how we can defend against them. It was fascinating to see how much happens behind the scenes when we simply browse the internet or send a message. This subject made me think seriously to take a career in networking and cyber security. Because of my passion, I applied to join the ACU Cyber Security Program during my third and fourth years.Unfortunately, I didn't get a chance to be selected, but I didn't give up. I continued learning through the ACU LMS platform, using every available material to update and strong my knowledge.

When I was in my fourth year, I still learned the ACU LMS for advanced topics and revision. I realized that the ACU LMS was more than just an online classroom for me and it was my learning companion. Whenever I had free time, I opened the ACU LMS to review notes, rewatch videos, or take practice quizzes. I liked that it allowed me to learn independently. The ACU LMS was designed simple and user-friendly, and it always encouraged me to learn more and more courses.

My learning experience with the ACU LMS Learning Center has been a major part of my success at UTYCC. It guided me from the first year when I knew little about computers, to now, when I can program, analyze systems, and understand cyber security concepts. Through this journey, I gained not only technical knowledge but also how to used well online LMS system. I am truly thankful to UTYCC and the ACU LMS program for providing students the opportunity to learn through such a useful system.

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My Learning Experience with ACU-LMS

Valentino Hose / Maranatha Christian University

Hi, my name is Valentino Hose. I come from a country known for its rich culture, namely Indonesia and I come from Maranatha Christian University. I first started studying on ACU LMS because my professor introduced it to me in my first year of college. Initially, I only used this feature to complete assignments from my professor, so I still use it for assignments.

The first course I took was Introduction to Robotic Programming Using Virtual Robot VEX. My professor asked me to take this course because it would really help the learning in class and I would also get more knowledge. From the beginning when I was in high school majoring in social studies, at first I thought it would be difficult to follow the material which was very new for me, yes and the result was that at first I didn't understand any of the material given by the professor in class, but since the professor asked us to also study from the ACU LMS, slowly I started to understand what my professor was teaching.
Oh yea, this feature allows me to slowly follow the learning from the very complete module and the real explanations from the videos which keep my thoughts on the material from going all over the place.

I am quite happy because my lecturer introduced me to this ACU LMS, otherwise, I would have had a very, very hard time following the material being taught. From the various features in this ACU LMS, at the beginning of use, I was not confused about what to do, so my first impression of this LMS was that it was easy to understand, from the learning module feature to the quizzes, so it really made it easier for me to learn. My first challenge in learning is of course the language, so every time I study, I have to open the translator to better understand what is meant. Maybe if you could add an automatic translation feature in each course, it would really make it easier for me to learn.

I think that from studying on my own and getting a very positive impact, I want to tell a story so that many students out there who have difficulty studying in class can try learning the same material from ACU LMS. Yes, I hope that ACU LMS can provide more material so that students from all majors can get the same impact as me. Thank You "Terima Kasih".



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Learning experience with ACU-LMS via ACU

Gearald Christoffer Freederich / Maranatha Christian University

As an Informatics Engineering student, using ACU-LMS (Canvas) has become a vital part of my academic journey, especially in a field that requires both theoretical understanding and practical application. ACU-LMS offers a well-organized, intuitive platform that facilitates easy access to course materials, assignments, quizzes, and lectures, which greatly supports my learning process.

From a technical point of view, I appreciate ACU-LMS for its clean and user-friendly interface. It allows me to navigate efficiently through various modules and resources without unnecessary complications. The platform integrates multimedia content such as video lectures, slides, and quizzes that are crucial for grasping complex topics like programming, algorithms, and database management. These resources help me study at my own pace and review materials as needed, enhancing my understanding.

ACU-LMS also streamlines assignment submissions and feedback collection, which is essential for a discipline where iterative improvements to coding projects are common. Being able to upload files directly and receive timely comments from instructors keeps my workflow smooth and organized. Additionally, the mobile app functionality provides flexibility, enabling me to study and check updates on the go.

However, there are occasional technical hiccups, such as slight delays in loading large files or limited interactivity in discussion forums, which could be areas for future improvement. Despite these minor issues, ACU-LMS effectively supports a blended learning environment tailored to the needs of a technology-focused curriculum.

Overall, ACU-LMS is more than just a digital platform. It is an enabler of active, flexible, and student-centered learning. It equips me with digital discipline, time management skills, and a structured approach vital for success in the fast-evolving field of Informatics Engineering.

This experience with ACU-LMS has been instrumental in my academic development, providing a clear, accessible, and supportive digital learning environment that aligns well with the demands of my study program.



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Field Notes from Teaching an Ethical Hacking for ASEAN Cybersecurity Course on the ASEAN Cyber University (ACU) LMS Platform

Wilfridus Bambang Triadi Handaya / Atma Jaya Yogyakarta University

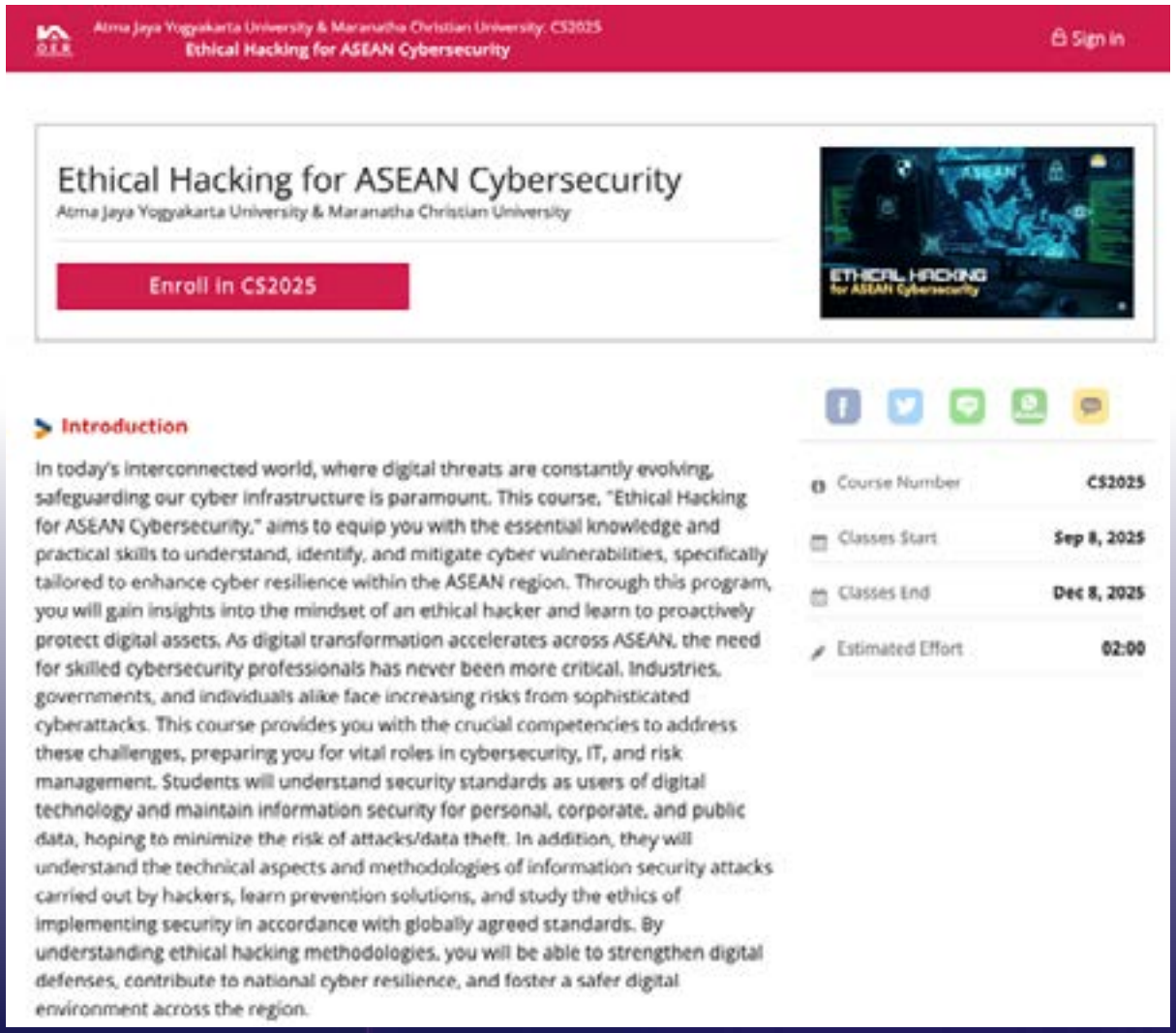
In 2025, Dr. Bernard Renaldy Suteja from Maranatha Christian University and I received a grant from the Korean Ministry of Education and the ASEAN Cyber University (ACU) Secretariat to develop and teach the course "Ethical Hacking for ASEAN Cybersecurity." For us, this was a valuable opportunity, not only because we could represent the university in the grant program, but most importantly, because the learning materials we developed were accessible to students from various countries.

We currently teach this class for fifth-semester Informatics students concentrating in security engineering. This is part of implementing a balanced and updated curriculum. All of this is intended to prepare students for the basic skills they need to observe examples of cyber-attacks and then learn countermeasures directly. On the other hand, ethical hacking requires instructors to constantly remind them of ethics, legality, and professional responsibility in every implementation of vulnerability assessment and penetration testing (VAPT) activities. The challenge in teaching this course is how to ensure that students understand and effectively apply ethical hacking concepts. Each student's diverse background and experience are essential aspects that must be taken into consideration in future teaching.

The ACU-LMS platform itself is robust, supporting video learning formats, quizzes, and several other interesting features. Instructors can view detailed information about each step taken by students, assessing whether or not they are accessing the material successfully. This will undoubtedly help instructors provide direct assistance when needed. We have prepared four learning object materials (LOMs) as teaching materials for the Ethical Hacking for ASEAN Cybersecurity course: video presentations, non-video presentations, narratives, and interactive infographics. This course lasts eight weeks. Each week is divided into two subtopics, totalling 16 topics to study. Every four weeks, or after students complete eight subtopics, a quiz session is held for periodic evaluation. This quiz also serves as a midterm and final exam.

Another experience we experienced in our involvement with the ACU-LMS, particularly in creating video materials for online access by students across countries, was preparing them in English and selecting examples relevant to the ASEAN region, not just Indonesia. Active discussions in offline classroom discussion forums have also enhanced students' current awareness of digital ethics. Questions about privacy rights, surveillance, and grey areas in cybersecurity research emerged as critical reflections on the material taught. Equally important, the collaborative effort between Atma Jaya Yogyakarta University and Maranatha Christian University in completing this grant has enabled us to become more systematic and complex in terms of material development, and, of course, in implementing it into the ACU-LMS system, a system we have never used before.

We are ready to collaborate with ACU again, for example, in developing materials on digital forensics and open-source intelligence, or engaging in other collaborative work such as workshops and research in the area of cybersecurity. The ASEAN region and South Korea require more cybersecurity professionals who not only possess strong technical skills but also have a solid ethical foundation. The ACU-LMS could be a great starting point for developing cybersecurity learning materials in the region. Thank you to the Korean Ministry of Education and the ACU Secretariat for providing this collaboration opportunity.



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Hybrid Learning, Policy Reform, and Regional Futures: Vietnam's Digital Transformation Trajectory

Tin Pham Nguyen / School of Education, University of Queensland

Abstract

Vietnam's digital transformation in higher education, accelerated by the COVID-19 pandemic, has evolved from short-term emergency remote teaching to coordinated, system-wide shift toward hybrid learning. Under the National Digital Transformation Plan for Education and Training (2022-2025) and Resolution 29-NQ/TW (2023) on comprehensive educational innovation, universities such as Vietnam National University (VNU) and the University of Danang have integrated learning-management systems, micro-credential pilots, and blended-delivery frameworks. This report analyses how these national digital strategies are being operationalised through institutional and regional collaboration to advance sustainable cyber-learning. Three structural enablers are identified: pedagogical capacity-building, digital inclusion, and ASEAN-aligned open-education partnerships, each essential to the long-term sustainability of a regional cyber-university model. Vietnam's case demonstrates how coordinated governance and local innovation can converge to support a resilient, inclusive, and collaborative online-curriculum ecosystem across ASEAN.

Keywords

#Vietnam #DigitalTransformation #HybridLearning #ASEANCyberUniversity #HigherEducation #OnlinePedagogy #PolicyInnovation #Sustainability #Equity #RegionalCollaboration

National Policy Context : From Crisis Response to Strategic Digital Transformation

The onset of the COVID-19 pandemic precipitated an urgent shift in Vietnamese higher education from face-to-face to remote modes of teaching and learning. In response, the Ministry of Education and Training (MOET) moved beyond short-term emergency measures to establish formal strategic frameworks. Decision 749/QD-TTg (2020) positions education as a priority sector within Vietnam's National Digital Transformation Programme, recognising its central role in advancing the country's broader transition toward a digital government, digital economy, and digital society by 2030 (Ministry of Science and Technology, 2020). Recent literature underlines that Vietnam is shifting from reactive digitalisation to transformative digital strategy (Nguyen & Hong, 2025).

The subsequent Plan for Digital Transformation in Education and Training 2022-2025 (MOET, 2022) outlines investments in cloud-based infrastructure, unified learning-management platforms, data-sharing frameworks, and human-capital development. These measures signal a transition toward a sustained, innovation-driven model rather than an ad-hoc response. UNESCO's regional review highlights Vietnam's extensive use of mobile phones for learning among rural and ethnic minority students and documents the country's rapidly expanding OER ecosystem, including national platforms such as the Vietnam Open Course Ware project (VOCW) and Vietnam Open Educational Resources (VOER) (UNESCO, 2023). A national readiness study conducted by the British Council in 2022 found that while many Vietnamese universities have adopted educational technologies, major gaps remain in strategic leadership, digital culture, and infrastructure (British Council, 2022). Together, these findings underscore both the progress and the systemic fragility of digital transformation across Vietnam's higher education institutions (HEIs).

Institutional Practices and Pedagogical Innovation

Implementation at the university level in Vietnam now reflects a move towards hybrid-pedagogy frameworks rather than reliance on emergency remote teaching. For instance, the Vietnam National University system blends synchronous platforms (e.g., Zoom, Teams) with asynchronous Moodle-style repositories. Recent national policy analyses note that universities such as the University of Danang have piloted micro-credential-style digital learning pathways that stack into full degrees, reflecting a shift toward modular, flexible learning (Nguyen & Tran, 2024). These institutional practices mark a more nuanced conceptualisation of sustainability in digital education, one where pedagogy, curriculum design, and learner agency play roles as central as technology infrastructure. Lecturer capacity-building has been supported through professional learning programmes, often in partnership with international agencies such as the Asian Development Bank (ADB) and British Council. However, the literature consistently notes that while urban HEIs may reach moderate levels of digital maturity, many rural and regional institutions lag significantly behind (Tran Mai Uoc, 2023). Digital-pedagogical competence, staff data-literacy, and institutional culture remain persistent challenges. Moreover, sustainable funding to maintain and evolve digital systems—beyond short-term pandemic relief resources—continues to be an unresolved restraint.

Equity, Access, and Socio-Cultural Dimensions

Digital equity is framed here as both a pedagogical and ethical imperative. Research indicates that students in mountainous provinces and in the Mekong-Delta region suffer from poor connectivity and reduced participation in synchronous online classes (UNESCO, 2023). According to the British Council's 2022 national readiness study, Vietnamese higher education institutions have increasingly prioritised equitable access within their digital transformation agendas. In response to persistent challenges related to connectivity, affordability, and inclusivity, universities are adopting flexible and inclusive design approaches, such as providing low-bandwidth and mobile-accessible learning materials, developing offline and blended learning options, and implementing accessibility-focused policies and staff training, to ensure that all students, including those from remote or low-income backgrounds, can participate effectively in digital learning environments (British Council, 2022). These measures aim to mitigate the "digital divide" that continues to shadow equitable online delivery.

From a socio-cultural perspective, early scepticism toward online learning, particularly concerns regarding academic rigour and instructional quality, appears to be gradually easing. As hybrid modes become more embedded, public trust has strengthened. Nevertheless, the sustainability of this shift depends on institutions developing rigorous quality-assurance processes, transparent assessment systems, and credible accreditation frameworks. In this regard, alignment with the ASEAN Qualifications Reference Framework (AQRF) (Association of Southeast Asian Nations, n.d.) will be critical to ensuring mutual recognition of online credits and supporting learner mobility across the region.



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Regional Collaboration and ASEAN Cyber University Integration

Vietnam's digital-higher-education trajectory aligns well with the mission of the ASEAN Cyber University (ACU), which aims to establish a sustainable, collaborative online curriculum-operation system across ASEAN. Alongside Vietnam, Malaysia, Thailand, Laos and the Philippines are also key participants. Vietnam's MOET has engaged in several open-education partnerships, including those with Korea's ACU initiative and the Thailand Cyber University Project (Thammetar et al., 2022).

There are several promising collaborative dimensions:

1. **Co-developed MOOCs:**
   Vietnamese universities could work with regional partners to produce MOOCs in areas such as teacher education, digital literacy, sustainability science, delivered bilingually (Vietnamese-English) and designed for ASEAN-wide uptake.

2. **Shared credential recognition:**
   Blockchain-secured digital badges and micro-credential frameworks could enable pan-ASEAN portability of online learning credentials and stackable pathways.

3. **Joint research clusters:**
   Collaboration on AI-enabled learning analytics, low-bandwidth design for developing contexts, and multilingual OERs could boost shared capacity-building and innovation.

Vietnam has the potential to act as a "digital bridge" within the Mekong sub-region, facilitating shared online curriculum platforms, inter-institutional peer review and curriculum co-delivery. However, to realise this, Vietnam must ensure platform interoperability, credential standardization, and alignment of quality frameworks across ASEAN.

Opportunities and Policy Recommendations

Institutional Capacity & Leadership:
Vietnam should establish national digital-pedagogy centres that serve as hubs for lecturer professional learning, pedagogical innovation, and collaborative online curriculum development. These centres should stimulate local innovation, research into online pedagogy, and regional partnerships.

Sustainable Funding Models:
Moving beyond pandemic-era grants, Vietnamese HEIs need sustainable funding models, including public–private partnerships, to modernise ICT infrastructure and ensure connectivity for rural students. The digital transformation literature underscores that hardware and platform investment alone is insufficient without human-capital and pedagogical resourcing (Tran Mai Uoc, 2023).

Regional Alignment:
Embedding Vietnam's hybrid-learning frameworks within ACU's curriculum-collaboration architecture is vital. Vietnam should take a proactive role in co-creating shared units, coordinating regionally scaled micro-credentials, and promoting cross-border credit portability and peer review.

Quality Assurance & Accreditation:
Development of ASEAN-wide standards for e-learning equivalence, online assessment integrity, accreditation, and mutual recognition are needed. Vietnam should work with ASEAN partners to harmonise quality frameworks while maintaining institutional autonomy and local relevance.

Inclusive Design & Accessibility:
Equity must remain central. Inclusive design must span assistive technologies, multilingual resources, gender-responsive digital education policies, and offline-capable platforms for rural students. Vietnam should leverage its experience with low-bandwidth mobile learning to inform regional micro-design heuristics.

Conclusion

Vietnam's journey in higher education digital transformation illustrates a critical shift from mere technological adoption to systemic reform of pedagogy, policy, and governance. The concerted coupling of national digital strategy with local institutional practice demonstrates how digital transformation can be pursued in ways that are both sustainable and socially equitable. As ASEAN Cyber University advances its vision of a regional, collaborative online curriculum system, Vietnam's case highlights the importance of balancing governance, pedagogy, and inclusivity. Achieving sustainability at a regional scale will depend on deepening partnerships, harmonising quality frameworks, embedding shared credential architectures, and sustaining long-term investment both human and digital capital.



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Challenges and Prospects for Sustainable ASEAN Cyber University as an Online Collaborative Curriculum Operation System

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Abstract

Despite ongoing efforts to enable flexible learning through MOOCs and micro-credentials in the Philippine higher education sector, several challenges continue to hinder the sustainability of the ASEAN Cyber University (ACU) as an Online Collaborative Curriculum Operation System (OCCOS). These include the lack of clear national policies for creating and implementing collaborative online curricula, limited institutional and faculty capacity to design and implement such courses, and the absence of a national level MOOC or micro-credential platform similar to Thai-MOOCs and K-MOOCs. Nonetheless, key national policies—including the Open Distance Education Act, Lifelong Learning Development Framework Act, Guidelines for Micro-credential Development, Approval and Recognition in Higher Education, and the Transnational Higher Education Law—provide for positive prospects for sustainable ACU implementation. Moving forward, the ACU project needs to collaborate with the Philippine Government and the Commission on Higher Education (CHED) on developing clear policies, enhancing institutional and faculty capacities, and improving cost-efficiency in support of lifelong learning, internationalization, and the digital transformation of Philippine higher education.

Keywords

#Philippines #TransnationalHigherEducation #OpenandDistanceLearning #Microcredentials

Introduction

The Philippines current adaption of flexible learning policies in higher education provides both challenges and opportunities for a sustainable ASEAN Cyber University (ACU) as an Online Collaborative Curriculum Operations System (OCCOS).

At the national level, the Philippine Government has institutionalized Open Distance Learning (ODL), the Philippine Qualifications Framework (PQF), the Expanded Tertiary Education Equivalency and Accreditation Program, and more recently (23 October 2025), lifelong learning in the Philippines. Key legislations related to the above-mentioned national policies include Republic Act (RA) No. 10650, 'the Open Distance Learning Act' in 2014; RA No. 10968, 'the PQF Act' in 2017; RA No. 12124, 'the Expanded Tertiary Education Equivalency and Accreditation Program Act' (2025); and RA No. 12313, 'the Lifelong Learning Development Framework Act' (2025) (Republic of the Philippines 2014, 2018, 2025).

At the systemic level, the Commission on Higher Education (CHED) has issued several relevant CHED Memorandum Orders (CMO), including CMO No. 4, Series of 2020, 'Guidelines on the Implementation of Flexible Learning;' and CMO No. 1, Series of 2025, 'Guidelines for Micro-Credential Development, Approval, and Recognition in Higher Education' (CHED 2020; CHED 2025).

These Republic Acts and CMOs collectively shape the current state of flexible learning and online distance learning in the Philippine higher education sector. However, in spite of the current enabling environment, key challenges and emerging opportunities remain in strengthening the sustainability of ACU as an OCCOS.

Challenges

There are currently no clear policies on the creation and coordination of an online collaborative curriculum in Philippine higher education, particularly in relation to the operation of ACU. In fact, there is no national policy framework guiding how Philippine Higher Education Insititutions (HEIs) can collaborate to jointly offer online curricula or courses.

Republic Act No. 11448, 'Transnational Higher Education Act,' provides an initial policy direction for cross-border higher education programs and could eventually support the development and delivery of collaborative online curricula. However, no specific policies are yet in place to operationalize collaborative online courses among Philippine HEIs or with international partners. Issues of quality assurance and recognition of jointly delivered online courses must therefore be addressed at the policy level.

Although CHED released the Guidelines for Micro-Credential Development, Approval, and Recognition in Higher Education in 2025, the document provides limited guidance specific to joint online course creation. It does, however, allow for the recognition of foreign micro-credentials and courses offered by external providers.

There remains a need to enhance the capacity of Philippine HEIs and their faculty to develop and deliver recognized collaborative online courses within and beyond the Philippine higher education sector. Furthermore, the Philippines does not yet have a national MOOC or micro-credential platform comparable to Thai-MOOCs or K-MOOCs, which may hinder the efficient development and delivery of collaborative online curricula and courses in the country.



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Prospects and Recommendations

The ongoing direction and development of Philippine higher education—particularly its focus on lifelong learning, online distance learning, the Expanded Tertiary Education Equivalency and Accreditation Program, and increasingly internationalization of Philippine higher education, and transnational higher education—highlights a positive prospect of the sustainability of the ACU as an OCCOS for the ASEAN and ASEAN-Korea regions.

The internationalization of Philippine higher education and the Transnational Higher Education Law support cross-border collaboration in the creation, offering, and recognition of joint and collaborative programs and courses. At the same time, the institutionalization of ODL, the issuance of guidelines on micro-credential development, approval and recognition, and the Lifelong Learning Development Framework Act show strong national support for open and flexible learning and partnerships between Philippine HEIs and foreign education providers, including those offering MOOCs and micro-credentials.

In particular, the Transnational Higher Education Law has significantly catalyzed cross-border collaboration in developing and delivering joint programs—and eventually courses—contributing to the goals of the Philippine Development Plan. It enhances the capacity of Philippine HEIs and their faculty to collaborate digitally with foreign HEIs and education providers.

CHED's Bayanihan COIL project and the CHED-supported Tarlac Agricultural University's TAU CONNECT (Converging Networked-learning Environments through Communication Technologies), which envisions fully integrating COIL and Globally-Networked Learning (GNL) into curriculum design and implementation to accelerate the standardization of degree programs in support of transnational higher education (CHED n.d., Tarlac Agricultural University (n.d.)) highlight national support for open collaborative curriculum and courses platforms and initiatives. This demonstrates the potential of ACU as an OCCOS.

However, the ACU project needs to collaborate closely with the Philippine Government and CHED to formulate clear policies, enhance capacities of Philippine HEIs and its faculty, and look into enhancing the cost-efficiency of utilizing ACU for Philippine higher education development, especially its direction on lifelong learning provision, internationalization of Philippine higher education.

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Credit Transfer and Stackable Degrees: Mechanisms, Impact, and Strategic Pathways

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Abstract

Malaysia is advancing flexible, lifelong learning through stackable degrees supported by a national credit transfer system. This approach enables learners to combine micro-credentials, MOOCs, and experiential learning into recognized qualifications aligned with MQF 2.0. While the model expands access and industry relevance, further progress depends on improving interoperability, institutional readiness, and cross-border credit recognition.

Keywords

#StackableDegrees #CreditTransfer #MicroCredentials #LifelongLearning #HigherEducationReform

Introduction

Malaysia's higher education landscape is undergoing a paradigm shift toward flexible and learner-centric pathways, enabling learners to build, transfer, and accumulate credits across institutions and learning modes. Central to this transformation is the credit transfer mechanism, which serves as the foundation of the stackable degree framework.

The stackable degree concept allows learners to combine verified, credit-bearing credentials—ranging from micro-credentials and MOOCs to professional certifications and experiential learning—into recognized qualifications aligned with the Malaysian Qualifications Framework (MQF 2.0). This modular and cumulative approach transforms education from a linear journey into a lifelong process of continual upskilling and reskilling.

Malaysia's implementation of stackable degrees is guided by the Guidelines to Good Practices: Micro-Credentials (MQA, 2020), the Guidelines to Good Practices for Quality Verification of Stand-Alone Micro-Credentials (MQA, 2023), and the MQA Circular No. 6/2025 on Credit Transfer Limits, ensuring that every credential stacked toward a degree is credible, measurable, and quality-assured.



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The Role of Credit Transfer in Stackable Degrees

Credit transfer is the lifeblood of the stackable degree system. It provides the structural bridge between short-term learning achievements and formal academic qualifications. Without an effective credit transfer framework, micro-credentials would remain disconnected; with it, they form a cohesive and nationally recognized education pathway.

In Malaysia, credit transfer operates through three primary pathways that maintain flexibility while preserving academic integrity:

i. Internal Credit Accumulation:
Micro-credentials derived from an institution's accredited program can be fully recognized and mapped directly to existing course components. These credits require Senate approval and are subject to curriculum alignment to ensure consistency with program learning outcomes.

ii. Cross-Institutional Credit Transfer (Up to 70%):
Learners who combine micro-credentials from multiple Higher Education Providers (HEPs) may transfer up to 70% of total credits, while at least 30% must be earned at the awarding HEP to maintain institutional integrity and quality assurance.

iii. Recognition of Non-Formal and Informal Learning (Up to 30%):
Through mechanisms such as Accreditation of Prior Experiential Learning for Credit (APEL.C), Credit Transfer for MOOCs (CTM), and Quality Verification (QV) for Stand-Alone Micro-Credentials, learners can convert prior learning and work experience into academic credits.

Mechanisms for Credit Recognition

Malaysia's credit transfer ecosystem integrates formal, non-formal, and experiential learning through structured recognition mechanisms:

- Credit Transfer (Formal Learning):
Recognition of credits from accredited courses within or across HEIs, based on mapping equivalence of at least 80% in content, learning outcomes, and assessment.

- CTM – Credit Transfer for MOOCs:
Credits granted for MOOCs with verified learner identity and summative assessments, guided by MQA's national standards.

- APEL.C – Accreditation of Prior Experiential Learning for Credit:
Recognition of learning acquired through professional experience, training, or self-directed study via portfolio submissions or challenge tests, capped at 30% of program credits.

- QV SAMC – Quality Verification of Stand-Alone Micro-Credentials:
Introduced in 2023, this ensures all micro-credentials, whether internal or external will meet MQA standards before being eligible for stacking into a degree.

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The Credit Accumulation and Stacking Pathway

Learners can begin their educational journey at any level through nano-credits, micro-credentials, or certificates, and progress incrementally toward higher awards.

> Nano Credits → Micro-Credentials → Certificate → Diploma → Bachelor's Degree → Postgraduate Degree

Each level aligns with MQF learning descriptors and is credit-verified. Learners can pause and re-enter their studies without losing progress, allowing them to build qualifications over time based on their career needs, finances, or life circumstances. For instance, a working adult may complete micro-credentials in Digital Marketing, stack them toward a Certificate in Business Studies, and later transfer those credits into a Bachelor's in Business Administration, reducing both time and cost while maintaining academic rigor.



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Benefits and Systemic Impact

The integration of credit transfer within stackable degrees delivers significant impact for learners, institutions, and national education goals.

- Learner-Centric Flexibility:
  Learners gain autonomy over pacing, cost, and modality, combining formal education with work and personal commitments.
- Institutional Collaboration and Agility:
  Credit transfer fosters inter-institutional cooperation through shared curricula, joint micro-credential development, and dual-award programs.
- Workforce and Industry Relevance:
  Stackable credentials aligned with industry competencies prepare graduates with adaptable, work-ready skills.
- Academic Quality and Transparency:
  Quality verification and APEL.C ensure all stacked credits meet national standards.
- Policy Alignment and Sustainability:
  The stackable degree model supports Malaysia's Higher Education Blueprint 2026–2035 on Flexible Education and Lifelong Learning.

Challenges and Quality Considerations

While the policy landscape is robust, implementation presents ongoing challenges:

- Fragmented Digital Systems:
  Inconsistent data integration across LMS platforms and student information systems limits interoperability for credit validation.
- Equivalency Mapping Complexity:
  Variations in course design, credit hours, and learning outcomes complicate cross-institutional credit recognition.
- Institutional Readiness:
  Some HEIs lack governance structures and trained personnel for large-scale credit transfer operations.
- Quality Assurance Overlaps:
  Overlapping responsibilities between institutional and MQA quality processes can delay verification.
- Cultural Resistance:
  Academic conservatism toward modularized and competency-based learning remains a barrier to reform.

Strategic Next Steps

To advance Malaysia's position as a regional leader in flexible, stackable, and lifelong learning, the following strategic priorities are proposed:

i. Develop a National Credit Bank and Learner Ledger: A centralized, digital platform that records, verifies, and tracks learner credits across institutions and learning providers.

ii. Standardize Credit Recognition Frameworks: Implement national equivalency matrices and shared rubrics for consistent credit mapping and evaluation.

iii. Strengthen Regional and Commonwealth Collaboration: Leverage ASEAN Credit Transfer System (ACTS) and Commonwealth networks to promote transnational articulation.

iv. Build Institutional Capability: Train academic leaders, QA officers, and registrars in credit mapping, validation, and micro-credential integration.

v. Pilot Industry-Linked Stackable Programs: Launch demonstrator programs in emerging fields such as Green Technology, Digital Economy, and Sustainable Development.

vi. Implement Learner-Centric Financial Models: Introduce pay-per-module, subscription, or microloan schemes to improve affordability and encourage lifelong participation.

Conclusion

The convergence of credit transfer and stackable degrees represents Malaysia's most significant leap toward a flexible, inclusive, and globally competitive education system. By connecting short-term learning to long-term qualifications, credit transfer empowers learners to curate their educational journeys while preserving academic quality and institutional integrity. As Malaysia and its Commonwealth partners advance this model, the vision of an interoperable, learner-driven higher education ecosystem—one where every micro-credential, every skill, and every learning moment counts—comes closer to reality.

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02

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Learning Without Limits: Conversion of Canva, Online Collaboration, and Project-Based Learning in Multimedia Classes

Sella Mawarni / State University of Makassar
Hartoto / State University of Makassar

Abstract

The integration of the Online Collaborative Learning (OCL) and Project-Based Learning (PBL) models in the Multimedia Learning course at Universitas Negeri Makassar enables students to remain actively engaged even while undertaking teaching assistance in schools. Through the online collaborative application Canva, students work together to produce their final projects. This case study is also supported by quantitative data from student responses, which indicate high levels of satisfaction and significant improvement in skills throughout the learning process. The implementation of this integrated model is expected to serve as a reference for other higher education institutions.

Keywords
#collaborativeclass #projectbasedlearning #learningmanagementsystem #Canva #casestudy

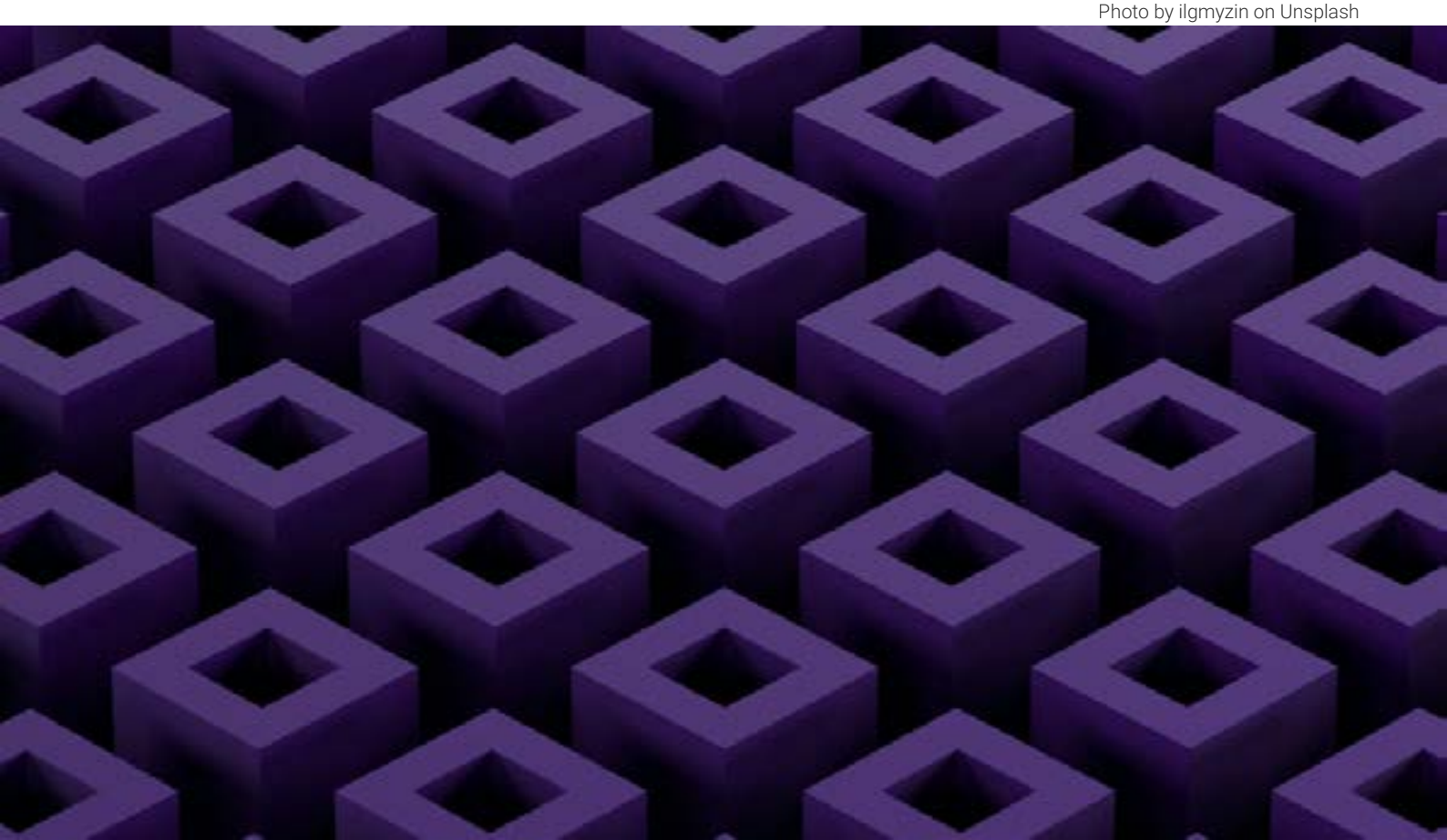
The Concept and Integration of OCL–PBL in Digital Learning

The integration of technology in higher education demands learning strategies that foster interaction and collaboration across space and time. Online learning models such as Online Collaborative Learning (OCL) and Project-Based Learning (PBL) are becoming increasingly relevant within the context of digital transformation in education (Kemdikbudristek, 2022). At Universitas Negeri Makassar, particularly in the Primary School Teacher Education Program, the Multimedia Learning course implements an integration of these two approaches to ensure that students can maintain academic engagement even while participating in teaching assistance at schools. This course requires students to produce interactive multimedia learning products aligned with the learning needs of the elementary schools where they are assigned. Thus, students not only study the theory of multimedia learning but also apply it directly through the development of ready-to-use digital learning materials that support education in the digital era.

This approach also aligns with the provisions of Article 2, paragraphs (1) and (2) of the Ministerial Regulation on Higher Education, Science, and Technology (Permendiktisaintek) No. 39 of 2025, which stipulates that "the quality assurance of higher education shall be carried out through the establishment, implementation, evaluation, control, and improvement of higher education standards," and that "higher education standards consist of the National Standards for Higher Education (SN Dikti) and standards established by the universities."

OCL is an approach that emphasizes the collective construction of knowledge through online interaction, discussion, and reciprocal reflection. It positions students as active learners who utilize digital technologies to understand concepts, construct meaning, and complete tasks collaboratively. Meanwhile, PBL focuses on the processes of exploration, design, and production of authentic projects relevant to real-world needs. PBL fosters higher-order thinking skills, creativity, problem-solving, and teamwork. The integration of these two approaches creates a comprehensive learning experience in which students collaboratively construct knowledge within digital spaces while systematically developing instructional products that align with the actual needs of users.

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Student Collaboration through the Digital Platform Canva

The learning design refers to the Semester Learning Plan (RPS) of the Multimedia Learning course in the Elementary School Teacher Education Program (PGSD) & Educational Technology Study Program at Universitas Negeri Makassar for the 2024/2025 academic year. The RPS outlines learning outcomes that position students at the C6 level of the cognitive taxonomy—creating multimedia learning products. Students are guided to understand multimedia theory, apply principles of instructional design, design flowcharts and storyboards, produce interactive learning media, and conduct product feasibility testing through alpha and beta evaluations.

The learning process integrates OCL, PBL, and blended learning methods. The SYAMOK Learning Management System (LMS) serves as the central hub for learning activities, including access to course materials in the form of videos and infographics, online discussions, assignment submissions, academic consultations, and progress reporting on product development. Students begin the course by exploring multimedia theories, followed by conducting needs analyses in the schools where they carry out teaching assistance. They then develop ideas, create concept maps, design workflows through flowcharts and storyboards, and produce graphic content using the Canva application—leveraging collaboration features such as “Can Edit” links for simultaneous design work, direct comments on design elements, and automatic version revisions. Finally, they integrate these contents into an interactive multimedia learning application.

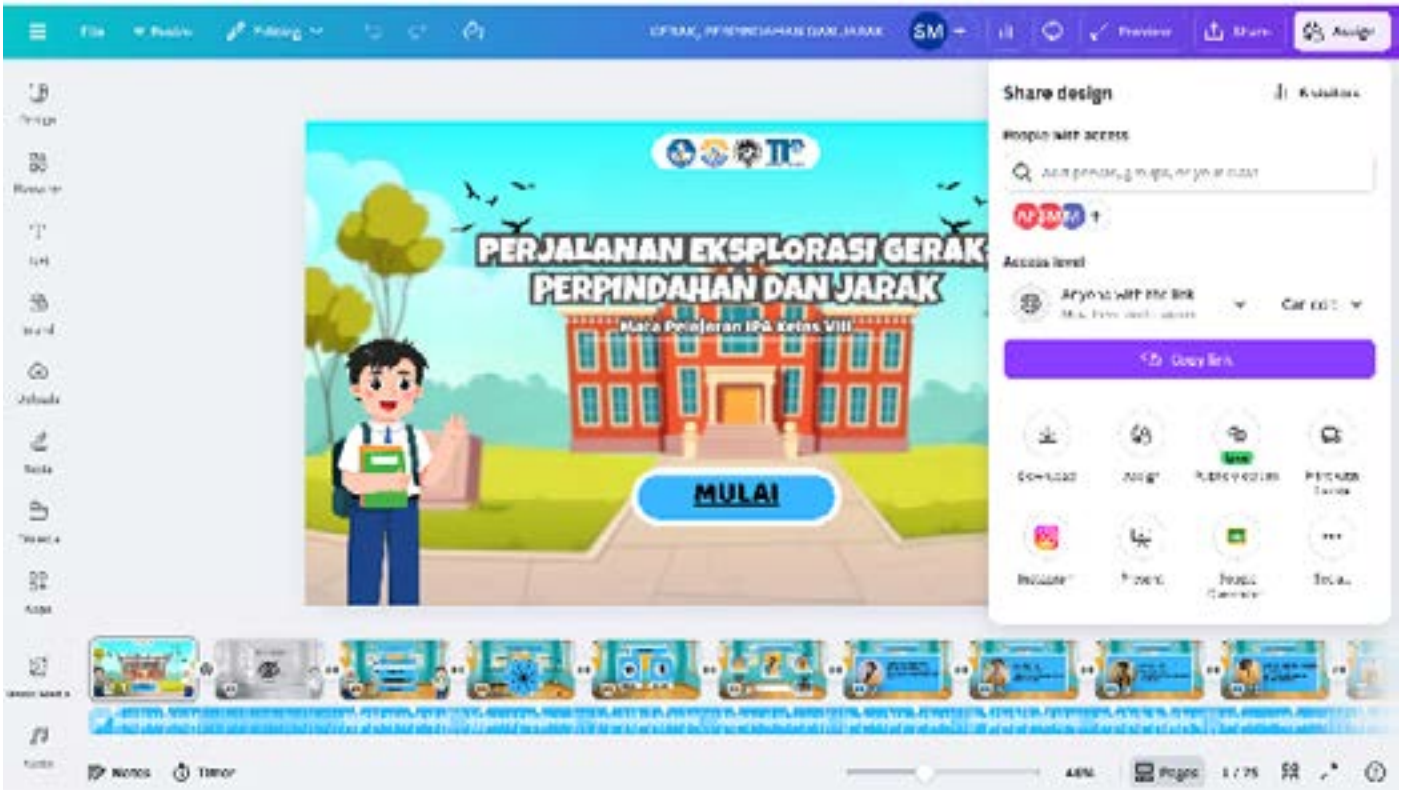


Figure 1. “Can Edit” Link Feature for Accessing Projects in Canva

The learning process unfolds gradually over one semester, beginning with conceptual orientation and culminating in the presentation of the final product. Evaluation is conducted through weekly progress reports, product design presentations, technical testing, media publication, and final learning reflections. Guidance is provided through synchronous face-to-face sessions and asynchronous online consultations, including informal communication channels such as WhatsApp groups. This approach ensures continuous supervision even when students are assigned to different teaching locations.

During collaborative work, students encountered several technical challenges, such as limited internet connectivity and variations in device specifications. Time management also emerged as a key challenge, as students needed to balance coursework with teaching responsibilities at schools. Furthermore, differences in students' initial levels of digital literacy affected the rhythm of group collaboration. To address these issues, lecturers provided intensive guidance, offered tutorial materials, implemented routine check-ins, and developed clear assessment rubrics to give students measurable guidelines throughout the process.

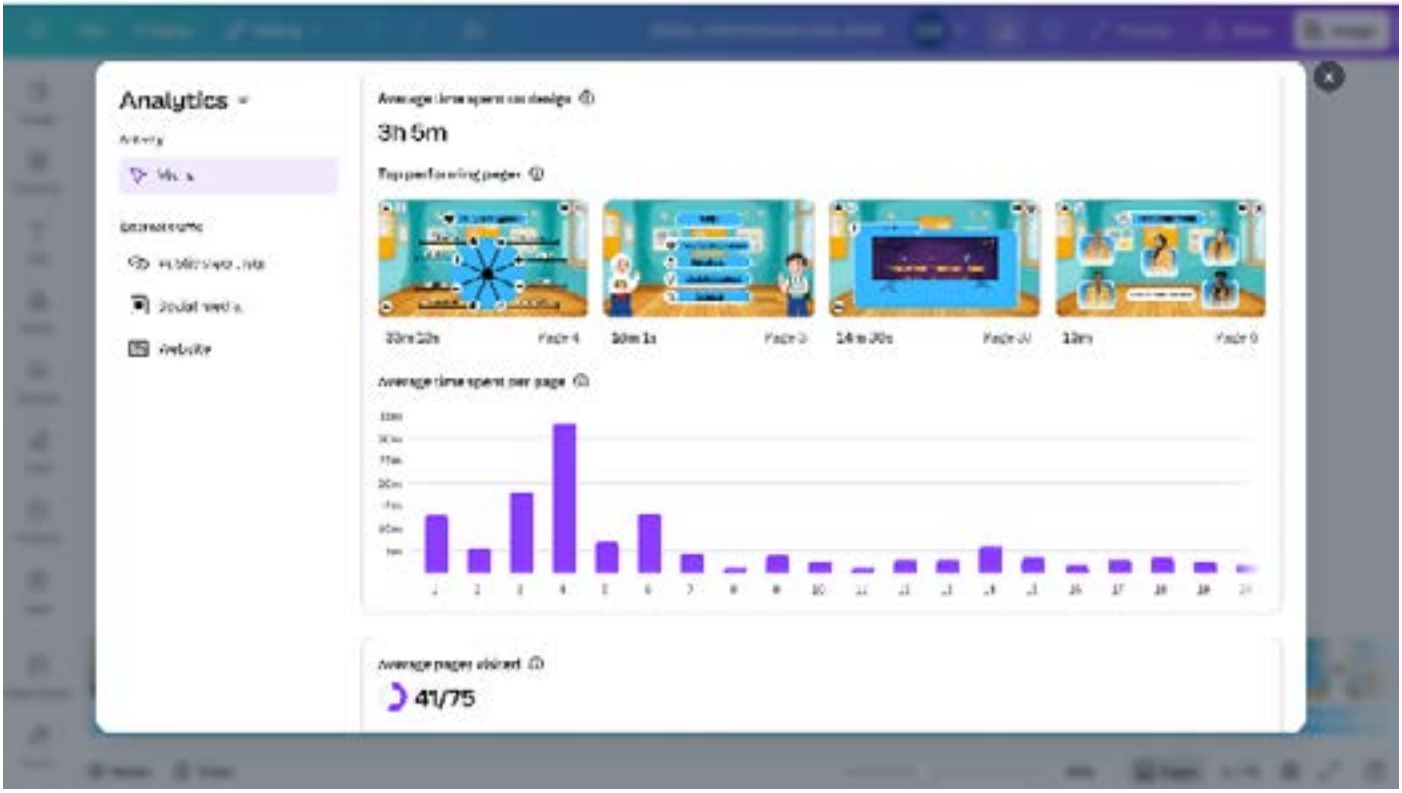


Figure 2. Analytics Feature in Canva for Monitoring Project Progress

A survey completed by 85 respondents (23 groups) from three Multimedia Learning classes indicated that the majority of students gave very positive feedback regarding the learning model that integrated Canva's collaborative features. The highest average score, 4.61 (92.2%), reflected that collaborative processes in Canva enhanced design skills and creativity. An average score of 4.60 (92.0%) indicated that collaborative processes in Canva made the development of interactive multimedia learning products more efficient. Canva's features also facilitated the integration of team members' ideas into a single cohesive multimedia product, with an average score of 4.42 (88.4%). Technical challenges such as internet connectivity issues and device limitations scored 4.40 (88.0%), while differences in team members' proficiency with Canva received a score of 4.14 (82.8%). Time coordination difficulties among team members were reported as a challenge with an average score of 3.81 (76.2%), but still within a positive range.

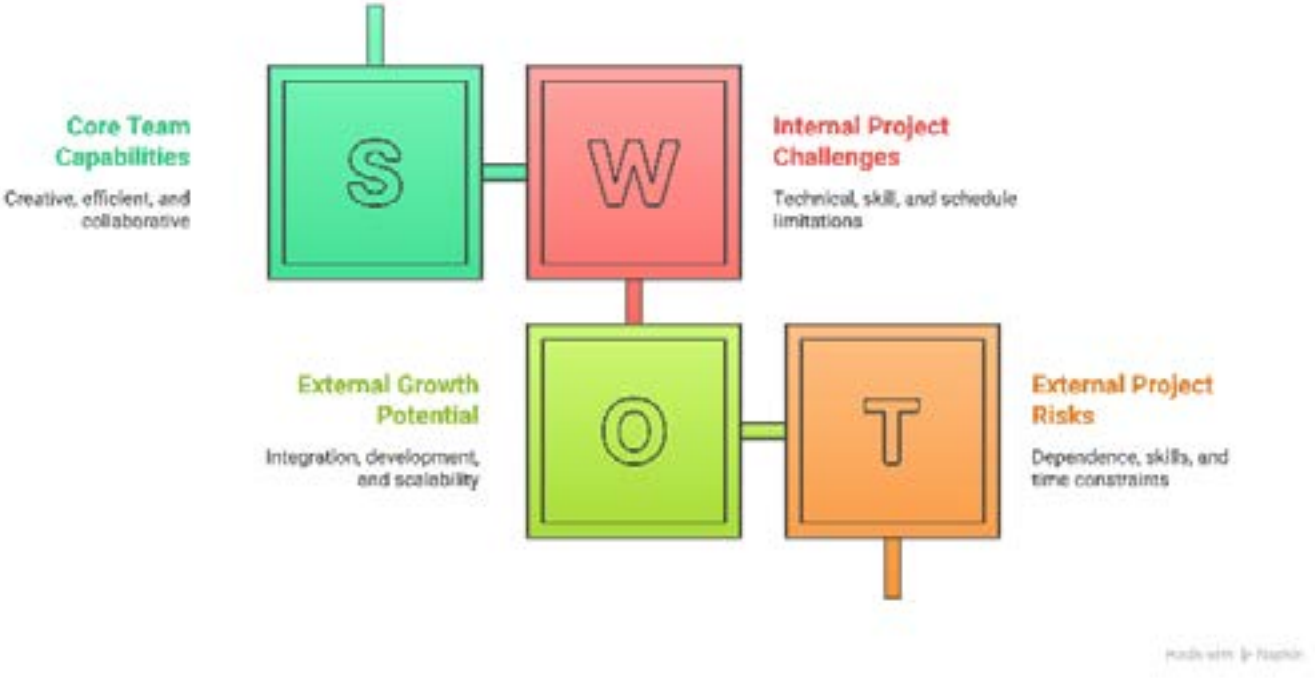


Figure 3. Analytics Feature in Canva for Monitoring Project Progress

Overall, the integration of OCL–PBL has been proven to facilitate meaningful and contextual learning. Students gained hands-on experience in developing digital media that aligns with the needs of elementary education, while also acquiring 21st-century skills such as collaboration, communication, digital literacy, and creativity. The use of Canva's collaborative features further strengthened the group learning experience, enabling students to work together in real-time, provide comments, and review design versions simultaneously. This model demonstrates high effectiveness in digital-era learning, particularly when students must balance remote learning with on-site teaching practice.

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Recommendations for Implementation in Higher Education

The integration of OCL and PBL in digital courses has shown a significant positive impact on enhancing student learning experiences. This model not only develops collaboration, creativity, and digital literacy skills, but also equips students with the ability to produce authentic multimedia products that are relevant to educational needs in schools. Students can collaborate online across locations using LMS platforms and external tools such as Canva, while assessment and feedback processes become more transparent and focused on both the process and the final product.

As part of managing learning outcomes, students' final projects in the Multimedia Learning course have been stored and showcased through the Padlet platform (https://padlet.com/sellamawarni1/produk-multimedia-pembelajaran-interaktif-2025-1pwx7ityc9vuagpd). This practice supports sustainable learning, where the digital gallery of student works serves not only as an academic portfolio but also as a source of inspiration and a concrete example for future students. Through this collective digital portfolio, instructors and institutions can provide continuous feedback while monitoring learning progress across cohorts.

For implementing the integration of OCL and PBL in other higher education institutions, it is recommended to design learning stages systematically, including needs analysis, planning, production, and continuous evaluation of products. Leveraging a combination of LMS and external collaborative platforms such as Canva, along with integrating digital galleries like Padlet to store and display student works, is essential. Guidance and digital literacy training for both instructors and students are crucial for overcoming technical challenges and ensuring effective remote collaboration. Evaluation systems should prioritize assessing both the group work process and the final product as learning outputs. Additionally, flexibility in synchronous and asynchronous schedules helps students manage their learning time, especially when they have off-campus activities such as teaching practice. By applying these strategies, institutions can build an inclusive, productive, and sustainable digital learning ecosystem capable of meeting the challenges of educational transformation in the digital era.

Conclusion

The integration of OCL and PBL in the Multimedia Learning course at Universitas Negeri Makassar has proven to be an effective approach in fostering meaningful, contextual, and sustainable learning experiences. Using the Canva platform, students were able to collaborate synchronously and asynchronously across different locations, engage in creative problem-solving, and produce authentic digital learning media that aligned with real classroom needs. Quantitative results from student feedback revealed high levels of satisfaction and skill development, particularly in creativity, efficiency, and teamwork. The collaborative features of Canva—such as real-time co-editing, inline commenting, and version tracking—enhanced communication and project integration among team members. These findings indicate that digital collaboration tools can significantly strengthen the outcomes of OCL–PBL models, especially in contexts where students balance coursework with teaching practice.

From an institutional perspective, the model supports sustainability through digital archiving and portfolio management. The use of Padlet as a repository for students' final projects not only preserves academic outputs but also facilitates inter-cohort learning and continuous improvement. This approach allows future students to learn from previous projects, ensuring knowledge transfer and iterative development over time.

In conclusion, the integration of OCL–PBL supported by collaborative digital platforms like Canva and learning management systems such as SYAMOK demonstrates a viable framework for higher education institutions seeking to enhance student engagement, creativity, and digital literacy. Moreover, it contributes to a sustainable learning ecosystem—where collaboration, innovation, and continuous reflection become integral parts of academic practice in the digital era.

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Challenges and Prospects for Sustainable ASEAN Cyber University as an Online Collaborative Curriculum Operation System

Khamkeo Hansana / Ministry of Education and Sports

Abstract

This paper discusses key challenges hindering the systematic implementation of online learning in higher education, including unclear monitoring mechanisms, limited digital readiness among instructors, administrative concerns about quality, insufficient funding, and unstable IT staffing. Despite these barriers, national consultations highlight a growing need for flexible learning due to economic constraints faced by many families. Following the ASEAN Cyber University (ACU) Conference 2025, the Ministry of Education and Sports approved the establishment of a monitoring committee, signaling stronger support for online learning. These developments indicate that online education can become an effective pathway to expand access and flexibility in higher education if supported by coordinated oversight and sustained capacity building.

Keywords

#OnlineLearning #HigherEducation #ImplementationChallenges #DigitalReadiness #EducationPolicy



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Challenges to the Systematic Implementation of Online Learning

There are several challenges that impede the systematic implementation of online learning in higher education institutions. One major issue is the lack of a clear mechanism for support and monitoring. At present, no monitoring committees are appointed at the department level to oversee and push the actual implementation of online learning and teaching, particularly in higher education institutions that previously received ACU funding. This has resulted in unsystematic and inconsistent implementation.

The second challenge is the limited readiness of human resources. Many teachers who will are expected to conduct online teaching are not confident in using IT because a number of them have not received adequate training. In addition, although administrators acknowledge that online teaching and learning are beneficial for current educational needs, they remain concerned about its effectiveness in terms of learning outcomes and quality. These concerns persist because no monitoring or quality assurance committees have yet been appointed.

The third challenge is relates to insufficient financial support. The annual government budget allocated for educational development is not enough to effectively support improvements in online learning. This financial limitation hinders the progress of education development more broadly.

The fourth challenge involves organizational constraints. Many IT staff who were previously trained have been reassigned to other duties, leaving new staff who may not possess the required IT skills to take over responsibilities related to online learning support.



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National Responses and Emerging Opportunities

To create more flexible learning opportunities that meet the current needs of the students, the Department of the Higher Education has organized conferences with higher education institutions. The results showed that online teaching and learning is increasingly necessary. Economically, majority of families cannot afford the high cost of higher education, including tuition and long duration of study. Therefore, online and flexible learning can motivate more students to pursue higher education while also allowing them to work part-time to support themselves.

In addition, after receiving the ACU Conference 2025 Report, the Minister of Education and Sports approved the establishment of a monitoring committee to push forward the implementation of online learning and teaching. This development marks an effective and promising step toward strengthening online teaching and learning in higher education institutions.

Conclusion

Online learning has the potential to expand access and flexibility in higher education, particularly for students who face economic barriers and need to balance study with part-time work. However, several systemic issues must be addressed, including the absence of monitoring mechanisms, limited IT readiness among teachers, administrative concerns about quality, insufficient funding, and organizational instability in IT staffing. Recent actions by the Ministry of Education and Sports—especially the establishment of a national monitoring committee—represent a positive step toward strengthening online learning implementation. Moving forward, coordinated support, ongoing professional development, adequate financial investment, and a stable organizational structure will be essential to ensuring that online learning becomes an effective and sustainable component of higher education.

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Analysis on Regional Educational Integration through an Online Collaborative Curriculum Operation System for Sustainable ASEAN Cyber University

Hla Myo Tun / Yangon Technological University

Abstract

The ASEAN Cyber University (ACU) initiative aims to leverage digital technology to create a collaborative and borderless higher education space. Its long-term success depends on evolving beyond a simple course-sharing platform into a sustainable and integrated ecosystem that supports credit recognition, joint degrees, and faculty development. While the initiative holds transformative potential for regional human capital advancement, the challenges are deeply rooted in the diverse political, economic, technical, and cultural landscapes of ASEAN Member States. Drawing from the recent experiences of Yangon Technological University (YTU), this analysis identifies the significant challenges and important opportunities and proposes a strategic plan for regional educational integration in the ASEAN region to support the sustainable development of ACU for all.

Keywords

#ASEANCyberUniversity #regionaleducationalintegration #onlinecollaborativecurriculum #digitalhighereducation #creditrecognition #facultydevelopment

Significant Challenges Observed by YTU

The significant challenges can be categorized into four main areas: structural and administrative, pedagogical and quality assurance (QA), socio-cultural and linguistic, and financial sustainability.

(1) Structural and Administrative Challenges

Credit transfer and recognition remain the single biggest hurdle for YTU. ASEAN Member States (AMS) have diverse national qualification frameworks, credit systems, and accreditation standards. Ensuring that a course taken at University A in Myanmar is recognized for credit at University B in another AMS requires complex bilateral or multilateral agreements. Establishing a universal ASEAN credit transfer system represents a monumental administrative undertaking.

Institutional autonomy vs. collective governance also presents a major challenge. Universities strongly value their autonomy. Convincing them to cede some curricular control, comply with common quality standards, and share resources requires a delicate balance of incentives and a robust, trusted governance structure for the ACU.

Digital infrastructure disparity is another critical issue. The “Digital Divide” within ASEAN is wide. Universities in some AMS have state-of-the-art IT infrastructure while others—particularly in rural Myanmar or less-resourced countries—struggle with access to reliable, high-speed internet. This creates inherent inequities in participation for both students and faculty.

Finally, data security and privacy regulations differ significantly across the region. Hosting student records, faculty information, and learning analytics on either centralized or distributed platforms must carefully navigate varying national data protection laws, creating regulatory and operational challenges.

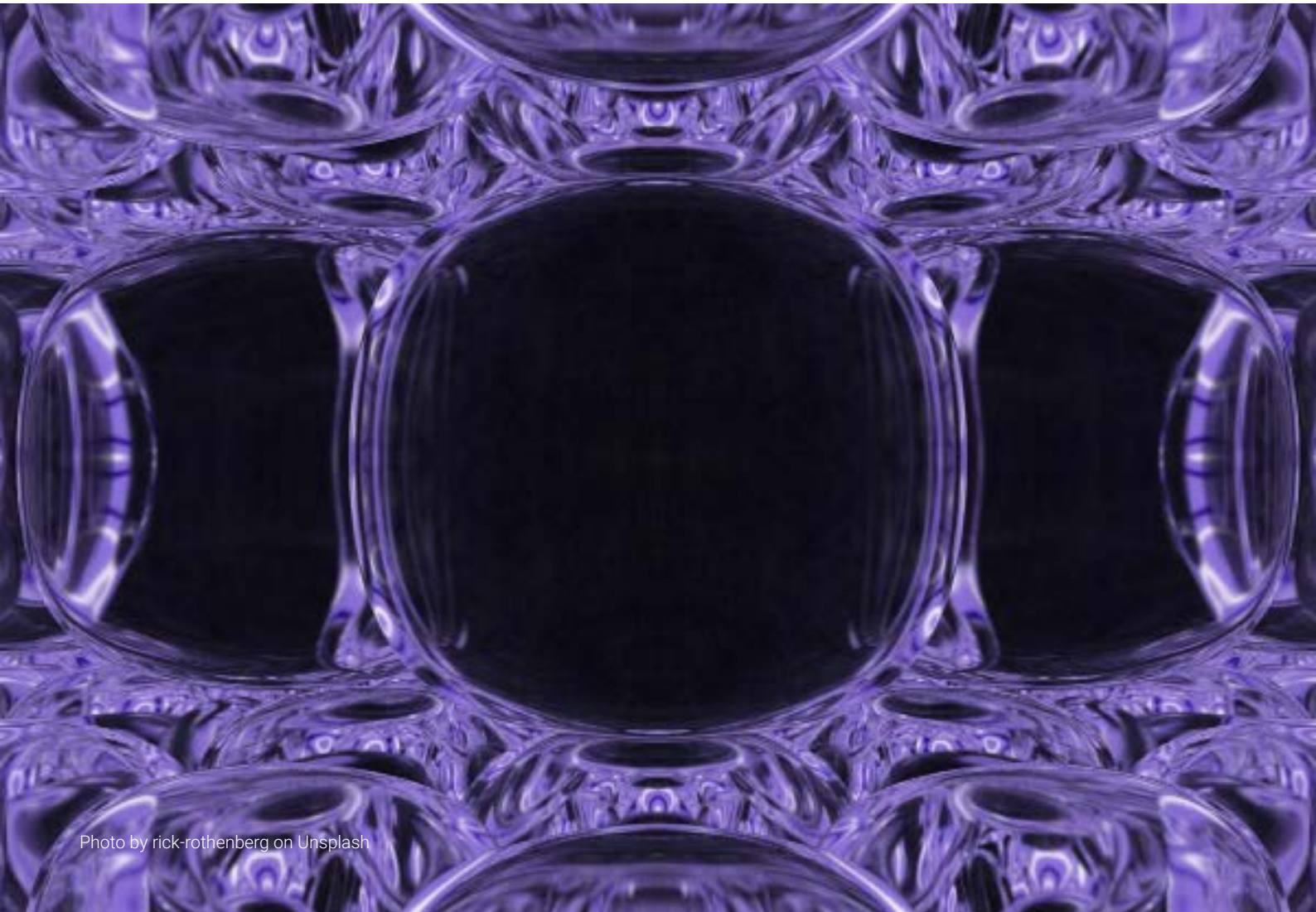


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(2) Pedagogical and Quality Assurance Challenges

Standardizing quality—specifically, developing a common, regionally QA framework—is essential to build trust in the ACU brand. Faculty readiness and incentives also remain a challenge, as not all academics are adequately prepared for high-quality online and collaborative teaching. Significant faculty development is needed in digital pedagogy, multicultural classroom management, and collaborative course design. Furthermore, universities must formally recognize and reward this labor-intensive work in promotion and tenure decisions. Curriculum localization vs. regionalization presents another difficulty, as striking a balance between a standardized regional curriculum and the inclusion of local contexts, case studies, and perspectives is difficult. For example, courses such as "ASEAN History" or "Environmental Policy" must be sensitive to, and inclusive of, diverse national narratives and realities. Ensuring academic integrity in online assessments across borders is also a persistent challenge. Proctoring solutions may not always be feasible or culturally acceptable, requiring more innovative assessment methods such as project-based learning and peer review.

(3) Socio-Cultural and Linguistic Challenges

Language barrier is a main concern. While English is the official working language of ASEAN, proficiency levels vary widely. Students from high-proficiency countries such as the Philippines may have an advantage over peers from Cambodia, Laos, Myanmar, or Vietnam, creating a non-level playing field. Cultural and learning style differences also presents unique challenges. Educational cultures across the region differ significantly—from highly hierarchical, teacher-centered models to more open, discussion-based approaches. These differences can lead to misunderstandings in collaborative online forums and group projects. The digital literacy divide is equally important and involves not only access to technology, but also the skills necessary to use it effectively for learning. Students from less digitally saturated environments may struggle with core online learning tools, placing them at a disadvantage.

(4) Financial Sustainability Challenges

A sustainable funding model is essential, raising the question of whether the ACU should be supported by member state contributions, student tuition fees, or a hybrid system. Reliance on volatile government grants is risky, while charging fees may exclude the very students the initiative intends to empower. The cost of development and maintenance also poses a direct challenge. High-quality online courses are expensive to develop, deliver, and maintain; moreover, the costs of the central platform, technical support, and administrative coordination require ongoing investment. Economic disparities, especially tuition fees, may be prohibitive for students from lower-income countries, even with subsidization. Therefore, a robust scholarship system is needed, which again requires a stable financial base.

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Important Opportunities

Despite the challenges, the potential benefits are immense and align perfectly with ASEAN's broader goals. The important opportunities include enhancing regional mobility and integration, optimizing resources and promoting specialization, fostering innovation and collaboration, and expanding access and equity.

(1) Enhancing Regional Mobility and Integration

This opportunity centers on virtual mobility and workforce preparedness. The ACU provides a form of "virtual mobility," allowing students to access excellent courses and faculty across ASEAN without the cost and visa hurdles of physical exchange. This fosters a genuine ASEAN Identity and stronger people-to-people connectivity. It can also produce graduates with skills and perspectives tailored for the ASEAN Economic Community, making them more employable anywhere in the region.

(2) Optimizing Resources and Promoting Specialization

This opportunity relies on sharing unique expertise and cost-effectiveness. No single university can excel in everything. Through the ACU, a university in a land-rich AMS such as Myanmar can offer a world-class course in "Smart Agricultural Systems," while technological hubs in other AMS can provide a course in "FinTech." This promotes regional specialization and resource sharing. In niche fields where it is not feasible for every university to run a full program, the ACU model becomes a cost-effective way to provide students with access to specialized knowledge.

(3) Fostering Innovation and Collaboration

This opportunity is rooted in important concepts such as interdisciplinary programs and faculty learning communities. The ACU is an ideal platform for creating interdisciplinary programs that address regional challenges—such as "Disaster Management and Climate Resilience," "Cross-Border E-Commerce," or "ASEAN Cultural Heritage Studies"—drawing on experts from multiple countries. Faculty learning communities also create natural networks for collaboration on curriculum development, joint research, and pedagogical innovation, strengthening the overall academic fabric of the region.

(4) Expanding Access and Equity

This opportunity is particularly impactful and includes two areas: lifelong learning and reaching underserved populations. The ACU can serve not only traditional undergraduates but also working professionals seeking upskilling and reskilling, which is crucial for the future of work in ASEAN. Reaching underserved populations has the potential to bring high-quality education to students in remote and rural areas who lack access to top-tier physical institutions within their own countries.

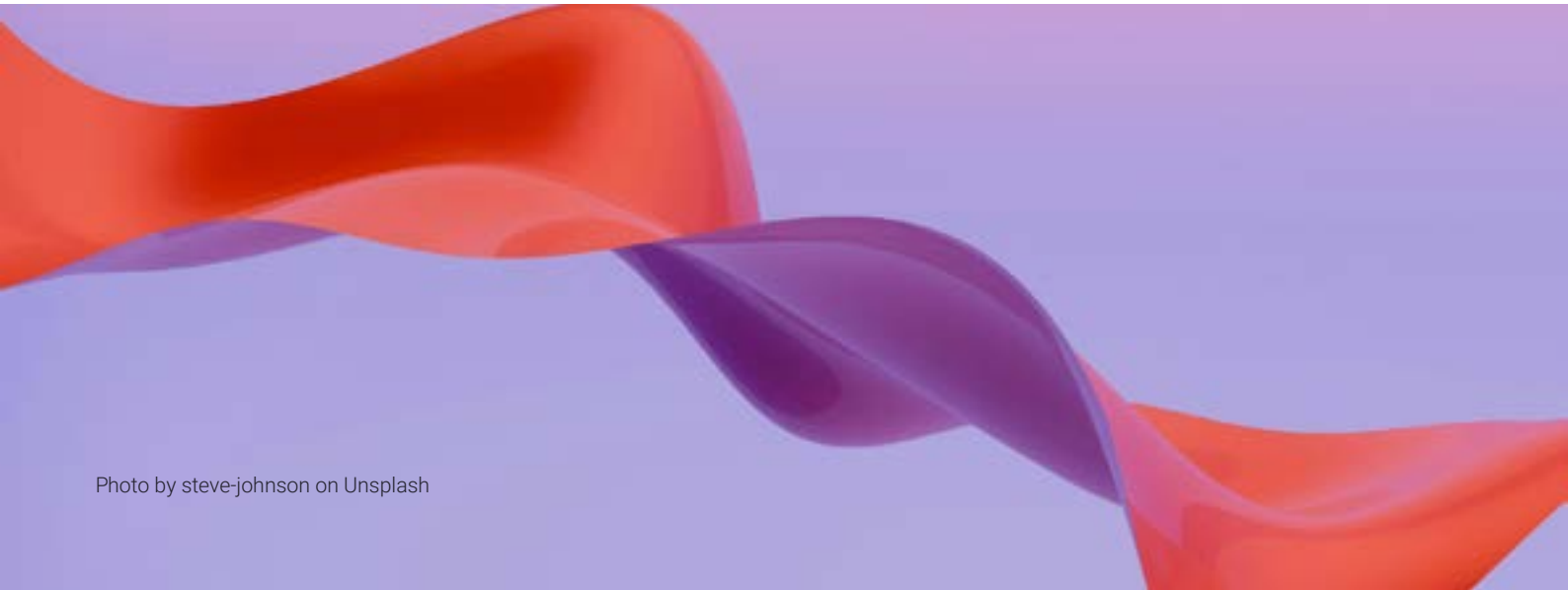


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Designing A Strategic Plan

The ACU must adopt a phased approach to move from concept to sustainable reality with the following pragmatic approaches. First, piloting with “Centers of Excellence (COE)” is important. One to three leading universities in specific, high-demand disciplines should be identified and a small portfolio of jointly-badged, high-quality courses should be developed as a pilot. The establishment of a robust governance and QA framework is also essential, creating a lightweight but authoritative ACU Governing Board with representatives from Member States and universities, while simultaneously developing a transparent ASEAN QA framework for digital education. Implementation of a “Stackable Credentials” model, instead of focusing solely on full degree programs initially, can offer micro-credentials, certificates, and digital badges for completed courses. These options are more flexible and can later be stacked towards a formal qualification, lowering the initial barrier to participation. Developing of a multi-tiered funding model with seed funding, Member State contributions and sustainable revenue mechanisms is also necessary for designing a strategic plan. Investing in “Human Infrastructure” by launching a parallel ASEAN digital pedagogy institute will help train faculty across the region in online collaborative teaching, ensuring a consistent and high-quality student experience. Finally, leveraging technology smartly is crucial, using a mix of synchronous and asynchronous learning, and ensuring that the core platform is low-bandwidth accessible and mobile-first, given the high mobile penetration in ASEAN.

Conclusion

Strong collaboration and educational integration are essential to sustaining the development of YTU through the ACU platform. The ACU, as a collaborative curriculum system, is a project of immense ambition and potential. Its challenges are significant, but not insurmountable; they reflect the very diversity that defines ASEAN. By adopting a phased, pragmatic, and collaborative strategy that focuses on building trust through small wins, establishing clear quality standards, and investing in both digital and human infrastructure, the ACU can evolve from a visionary concept into a cornerstone of a dynamic, integrated, and knowledge-driven ASEAN Community. Its success will depend less on the technology itself and more on the strength of political will, institutional partnerships, and shared commitment to educational equity that underpin it.

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03

Regional Platforms & Cross-Border Collaboration

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Singapore

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Thailand

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Republic of Korea

Towards a Sustainable ASEAN Cyber University

Edwin Tan / Yale–NUS College

Abstract

Conceptualised in 2009, the ASEAN Cyber University (ACU) was envisioned as a collaborative initiative to strengthen the e-learning capacity of ASEAN Member States. Since 2018, the development of its learning management system has brought the project closer to operational reality. The ACU holds significant potential to deepen regional cooperation and expand the range of online educational offerings across the region. However, to ensure long-term sustainability, the project must address key challenges in recognition, quality assurance, and learner engagement.

Keywords

#ACUProject #OnlineCourse #Singapore #feasibility #sustainability

ASEAN Cyber University

Background

The ASEAN Cyber University (ACU) was initiated by the Ministry of Education of the Republic of Korea (ROK) to promote digital higher education collaboration within the ASEAN region. The primary goal of ACU is to expand educational opportunities among ASEAN Member States through university partnerships and the sharing of Open Educational Resources (OER).

Currently, five countries—Cambodia, Laos, Myanmar, Vietnam, and Thailand—have joined as member states. ACU serves as a regional platform to strengthen e-learning capacity and to reduce disparities in access to higher education.

Educational Landscape of ASEAN

As of October 2025, ASEAN officially includes eleven member states, following the accession of Timor-Leste. The region's estimated population in 2024 was 686.1 million, characterized by demographic diversity and a relatively young population: about 51% are in their productive years (20–54), and roughly one-third are under the age of 20.

According to the World Bank's country income classification, ASEAN Member States can be grouped into three tiers of economic development. At the high-income level are Singapore and Brunei Darussalam, both of which have advanced economies and strong education systems. Malaysia and Thailand fall into the upper-middle-income category, reflecting their more diversified industries and growing middle class.

Meanwhile, Indonesia, the Philippines, Viet Nam, Lao PDR, Cambodia, and Myanmar are classified as lower-middle-income economies, where education systems are still developing and face challenges related to access and quality.

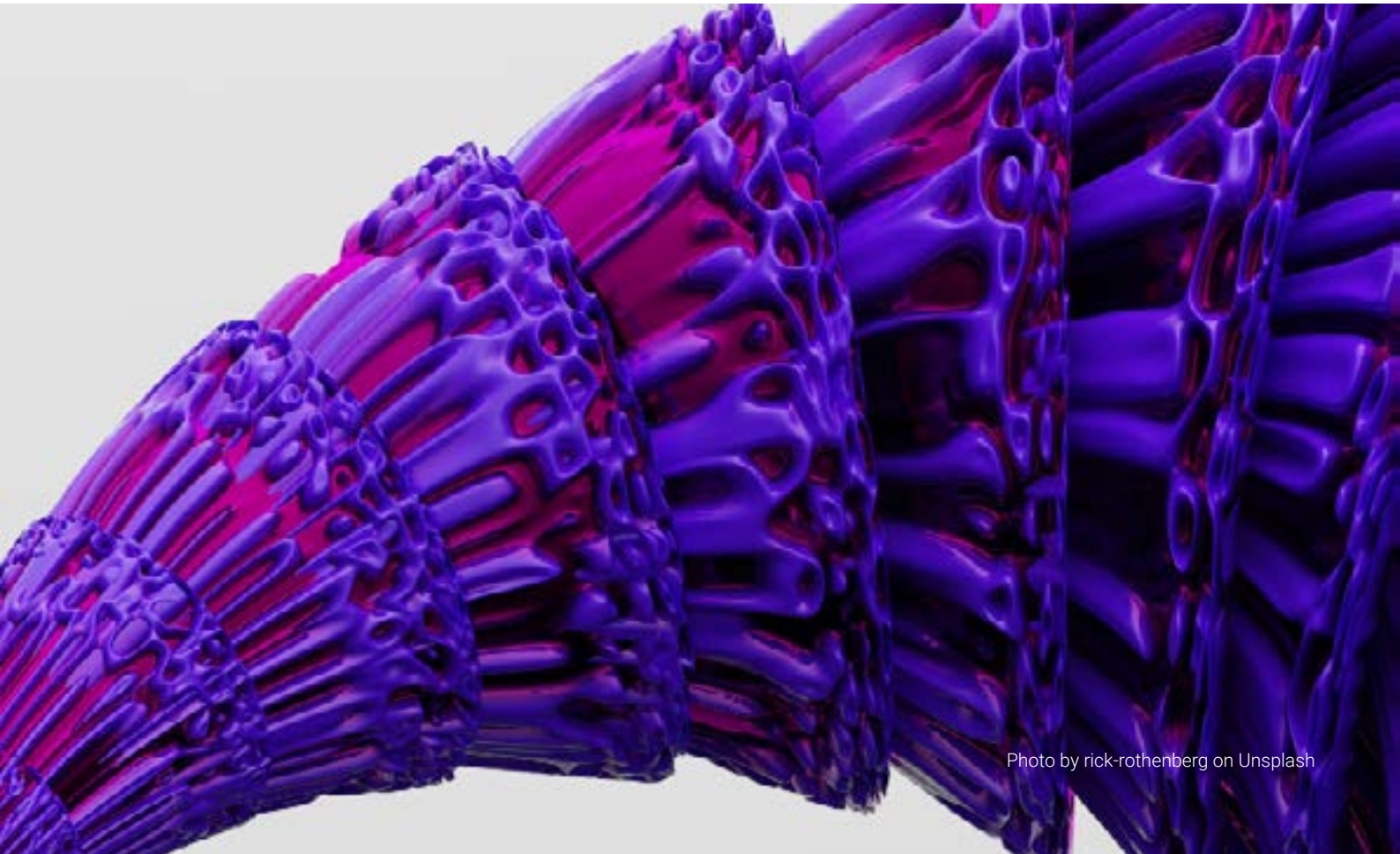


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Table 3: Gross enrolment ratios (%) for tertiary education, by country (UIS)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Brunei Darussalam	17.4	22.43	24.34	29.29	35.56	34.87	35.07	31.2	30.77	31.99
	12.74	16.4	17.25	21.23	28.99	26.88	27	24.44	23.89	25.35
	22.49	28.98	32.04	38.05	46.92	43.66	43.99	38.71	38.42	39.36
Cambodia	14.89	...	...	...	13.24	...	11.76	12.18	11.85	12.89
	18.23				14.39		11.94	12.07	10.21	11.87
	11.42				11.81		11.58	12.28	13.54	13.93
Indonesia	26.3	30.43	31.06	30.9	33.25	35.44	36.44	36.31	...	...
	28.4	29.85	29.43	29.18	31.51	33.26	34.01	33.75		
	24.21	31.02	32.73	32.66	35.05	37.7	38.99	38.99		
Lao PDR	17.81	17.67	19.02	18.37	18.17	17.26	15.74	14.97	14.45	13.48
	20.58	19.43	20.31	19.08	18.66	17.35	15.44	14.43	13.67	12.6
	14.99	15.88	17.71	17.65	17.67	17.17	16.05	15.54	15.25	14.38
Malaysia	36.15	37.61	39.07	39.51	45.59	46.76	43.72	45.13	43.06	42.57
	31.15	32.23	33.25	33.89	39.84	43.15	40.55	40.66	37.71	37.05
	41.41	43.29	45.22	45.43	51.66	50.58	47.07	49.85	48.74	48.44
Myanmar	14.18	13.53	...	...	...	...	...	18.83	...	...
	12.14	12.19						15.63		
	16.2	14.86						21.98		
Philippines	30.8	31.21	33.52	35.36	37.8	40.42	35.48	29.55	31.62	33.37
	27.57	28.07	29.73	31.33	32.59	35.29	30.78	25.61	27.49	29.24
	34.13	34.46	37.47	40.11	42.84	45.81	40.42	33.69	36	37.75
Singapore	...	...	...	...	...	83.94	84.79	88.89	91.09	93.13
						77.86	78.94	82.91	85.58	88.38
						90.57	91.1	95.42	97.09	98.27
Thailand	52.26	50.68	49.85	50.18	...	49.29	47.25	45.95	44.85	42.64
	45.99	43.8	42.38	42.74		41.05	39.46	38	37.56	35.79
	58.6	57.67	57.47	57.79		57.77	55.31	54.21	52.44	49.78
Viet Nam	24.95	25.19	25.19	30.72	29.07	28.54	...	...	28.64	...
	24.63		26.37	29.91	29.0	25.53				
	25.28		23.95	31.57	29.16	31.72				

Figure 1. Gross enrolment ratios (%) for tertiary education

Importance of ACU

Although higher education access in ASEAN has improved, privatization of education has disproportionately benefited students from wealthier backgrounds. Research also shows that social background continues to shape educational access and achievement.

By lowering costs and removing spatial and temporal barriers, ACU can democratize access to higher education. The flexibility of e-learning allows students from remote or disadvantaged areas to pursue degrees that would otherwise be inaccessible to them.

Prospects of the ASEAN Cyber University

(1) Diverse Course Offerings
ACU's regional framework enables participating institutions to offer a wide variety of courses—from computer science and engineering to languages, literature, and design. Universities can capitalize on their areas of expertise without the burden of maintaining a full range of departments. This approach not only mitigates manpower shortages but also promotes knowledge sharing among institutions.

(2) Fostering Cross-Cultural Exchange
Through online learning, ACU can create a virtual meeting ground for students across ASEAN. Such interaction encourages cross-cultural dialogue and collaboration, strengthening the sense of regional identity and mutual understanding. For many learners, this could become a highly enriching and rewarding educational experience.

Challenges to Sustainability

(1) Preference for In-Person Universities
A major obstacle for online universities is that many students still value traditional universities for their social networks and face-to-face engagement. While e-learning offers flexibility, it may lack the social dimensions that contribute to personal development. This challenge could be mitigated by developing online community platforms, virtual seminars, and cross-border telecommunication opportunities that replicate the networking aspects of in-person study.

(2) Perceived Lack of Support
Research on Coursera has shown that interaction between students and support staff significantly affects learning outcomes. Regular engagement with mentors, administrators, and peers helps students overcome challenges and sustain motivation. ACU must therefore prioritize robust student support systems, integrating mentoring and peer-learning mechanisms throughout the semester. (Ho et al. 2023)

(3) Learner Motivation
A recurring issue in online education is low motivation and concentration among learners (Rojko & Likovič, 2023). In regions where university enrolment remains relatively low, there may be limited societal pressure to pursue higher education. ACU must therefore design engaging, contextually relevant content and introduce incentives, such as micro-credentials or employability-linked certifications, to encourage participation.

(4) Perceived Usefulness
For many students, employability remains the most important outcome of higher education. As shown in Ho et al. (2023), factors such as content quality, social influence, and perceived usefulness significantly affect students' willingness to continue online learning. The implication is that the practical value of courses offered through ACU must be clearly communicated. Curriculum design should emphasize skills that are applicable to the job market, while industry partnerships can enhance the perceived credibility of ACU credentials.

(5) Recognition and Quality Assurance
Recognition remains a critical challenge. Currently, ACU lacks participation from countries with globally ranked universities such as Singapore and Malaysia. According to the QS World University Rankings, the top institutions in Southeast Asia are concentrated in these two countries.

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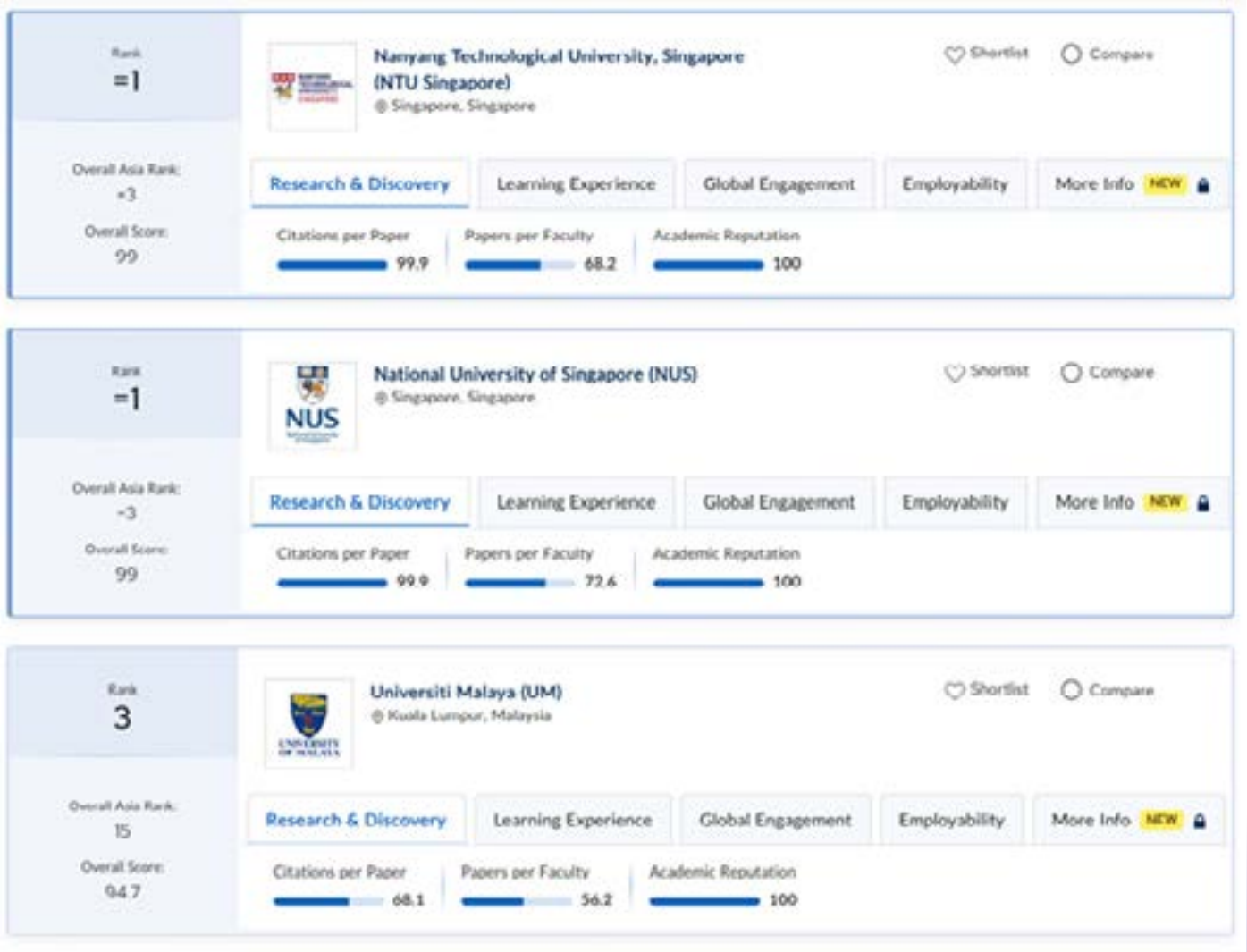


Figure 2. QS World University Rankings for Southeast Asian countries

Involving such partners could enhance ACU's prestige and legitimacy, leading to broader recognition of its qualifications. Establishing shared quality assurance frameworks and mutual credit recognition systems will also be vital for regional acceptance.

Conclusion

The ACU represents an ambitious and collaborative step toward inclusive education in Southeast Asia. By pooling resources and expertise, ACU can expand access to tertiary education, foster regional cooperation, and provide flexible learning opportunities. However, the experiences of global MOOCs like Coursera show that online learning cannot yet fully replace traditional universities.

While ACU's role is particularly valuable in countries with limited higher education infrastructure, it should aim to complement rather than substitute in-person learning. Ultimately, a hybrid model that combines the flexibility of online platforms with the engagement of physical learning environments will be most effective.

By focusing on sustainability, quality assurance, and learner engagement, the ASEAN Cyber University can become a cornerstone of regional educational cooperation and help ASEAN youth realize their full potential.

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Challenges and Prospects for a Sustainable ASEAN Cyber University as an Online Collaborative Curriculum Operation System: Thai MOOC Academy Perspectives

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Abstract

ASEAN needs a shared, scalable Online Collaborative Curriculum Operation System (OCCOS) to accelerate equitable skills, trusted recognition, and lifelong learning across borders. This country report advances a Thai MOOC Academy perspective on operationalizing OCCOS through: people-first innovation and policy design (Dousay, 2025), educator-in-the-loop AI preserving human judgment (Hu, 2025), learning analytics as the governance bridge for responsible GenAI adoption (Kovanovic, 2025), and MOOC-to-university pathways that globalize access (Staubitz, 2025). Grounded in IEC2025/ICTAECT2025, we position micro-credentials, a national catalog, and a credential wallet as the backbone for portable, verifiable learning and recognition of prior learning (Praphasrathorn, 2025), aligned with AI-enhanced MOOC quality-assurance and standardization models (Iiyoshi, 2025). Evidence from AI-enabled blended teaching at national scale illustrates phased capability-building and safeguards (Wang, 2025). Complementary Thai MOOC sessions on analytics-driven GenAI use, "AI for work," GenEd/LLL micro-credentials, mixed-reality learning, and national catalog design provide actionable detail (Thai MOOC, 2025). We propose a practical OCCOS blueprint for ASEAN that federates catalogs, credentials, analytics, and educator capacity so that ACU, TCU, and regional partners can deliver trusted, human-centered digital learning.

Keywords

#ThaiMOOC #ASEANCyberUniversity #MicroCredentials #LearningAnalytics #AIenhancedMOOC

Human-Centered Innovation and Governance for OCCOS

> ***Implication***
>
> ASEAN nations must unite their digital learning systems or risk falling behind in the AI-driven global economy.

Thailand's national digital learning platform (Thai MOOC Academy under TCU) faces rapid generative AI advances, widening skills gaps, and fragmented cross-border recognition. To address this, ASEAN must shift from isolated initiatives to a federated, people-first Online Collaborative Curriculum Operation System (OCCOS). Insights from IEC2025/ICTAECT2025 argue that sustainable digital learning requires aligning policy, pedagogy, data, and credentials so regional partners can co-create, share, quality-assure, and recognize learning at scale.



Figure 1. Distinguished Keynote Speakers in International E-Learning Conference 2025 and ICTAECT2025

Structural challenges inhibit this vision. Innovation often prioritizes tools over people and policy, producing short-lived pilots that fail to scale equitably (Dousay, 2025). GenAI has unsettled assessment and quality assurance, necessitating clearer teacher-AI role boundaries and analytics-informed governance (Hu, 2025; Kovanovic, 2025). Recognition also lags; credentials are not consistently portable, limiting workforce mobility (Praphasrathorn, 2025; Staubitz, 2025). These challenges are magnified in ASEAN's diverse ecosystem, requiring interoperable architectures (Iiyoshi, 2025).

This report proposes an OCCOS blueprint from the Thai MOOC Academy perspective to support ACU collaboration. It synthesizes human-centered policy (Dousay, 2025), educator-in-the-loop AI (Hu, 2025), analytics-anchored governance (Kovanovic, 2025), ecosystem scaling (Staubitz, 2025), portable micro-credentials (Praphasrathorn, 2025), AI-enhanced standards (Iiyoshi, 2025), and national blended models (Wang, 2025). Thai MOOC is positioned as a potential OCCOS hub, hosting shared services, catalog standards, credential wallets, and analytics pipelines while federating content with ACU partners (Paper summarizing seven speakers, 2025; Praphasrathorn, 2025).

Implication

By prioritizing people over technology, OCCOS can create a sustainable and inclusive digital learning ecosystem that empowers educators and learners alike.

Lasting innovation requires prioritizing people over platforms. For OCCOS, this means placing educator capability, learner inclusion, and shared governance ahead of tools.

1. Policy and Roles: Investing in Human Infrastructure

Durable change requires policy that resources mentoring, instructional design, and local ownership rather than just hardware (Dousay, 2025). OCCOS must embed participatory design, treating learners and educators as partners to improve relevance in diverse ASEAN contexts (Dousay, 2025; Hu, 2025). Thai MOOC can lead by establishing national studios where faculty co-develop OCCOS-aligned modules, transforming pilots into regional public goods (Paper summarizing seven speakers, 2025).

Crucially, policy must clarify roles. AI may draft, translate, or identify patterns, but educators must retain judgment, ethics, and socio-emotional support functions (Hu, 2025). A national CPD pathway covering AI literacy, prompt engineering, and assessment redesign is a prerequisite for OCCOS onboarding (Hu, 2025; Kovanovic, 2025).



Figure 2. Dr. Tonia Dousay, President of AECT USA, addressing a keynote speech

2. Governance and Equity at Scale
Good governance must ensure trust and portability outcomes. OCCOS requires adopting credential schemas compatible with JMOOC/AI-enhanced models for external verification (Iiyoshi, 2025; Praphasrathorn, 2025). A stewardship analytics layer is essential to monitor participation and GenAI-usage signals (Kovanovic, 2025). Ethics must be integrated through transparent prompts and bias checks (Hu, 2025; Kovanovic, 2025). To ensure equity, OCCOS must be designed for multilingual, low-bandwidth delivery from the outset (Staubitz, 2025), while using micro-credentials to capture Recognition of Prior Learning (RPL) without compromising standards (Praphasrathorn, 2025).

Educators-in-the-loop AI: Roles and Pactice

> ***Implication***
>
> Keeping educators at the heart of AI-driven education ensures ethical, safe, and effective learning.

Sustainable AI in education must keep educators "in the loop" as designers and ethical stewards. Thai MOOC can encode this into OCCOS through clear role matrices, assessment redesign, and safety practices.

1. Role Boundaries and Assessment
Course templates should map tasks to AI, educator, and student responsibilities (Hu, 2025; Paper summarizing seven speakers, 2025). We endorse a dual-track assessment model: (a) controlled, AI-limited checks for core knowledge; and (b) AI-inclusive authentic tasks requiring process documentation, such as prompt portfolios and reflective critiques (Kovanovic, 2025; Hu, 2025). Thai MOOC will build banked templates for these assessments based on "AI for Work" sessions (Thai MOOC, 2025).

2. Classroom Practice and Safety
Teachers should model concepts, let AI provide practice, and debrief on AI misconceptions (Hu, 2025). Learning Analytics (LA) signals, such as time-on-task or error clusters, should trigger human intervention (Kovanovic, 2025). Medical education pilots show agentic tools can support mastery while keeping teachers in control (Wang, 2025), while Thai MOOC's mixed-reality activities shift abstract STEM content into orchestrated embodied practice (Thai MOOC, 2025). Safety must be designed in through transparent AI-use policies in syllabi and risk controls against bias or prompt injection (Hu, 2025; Kovanovic, 2025).

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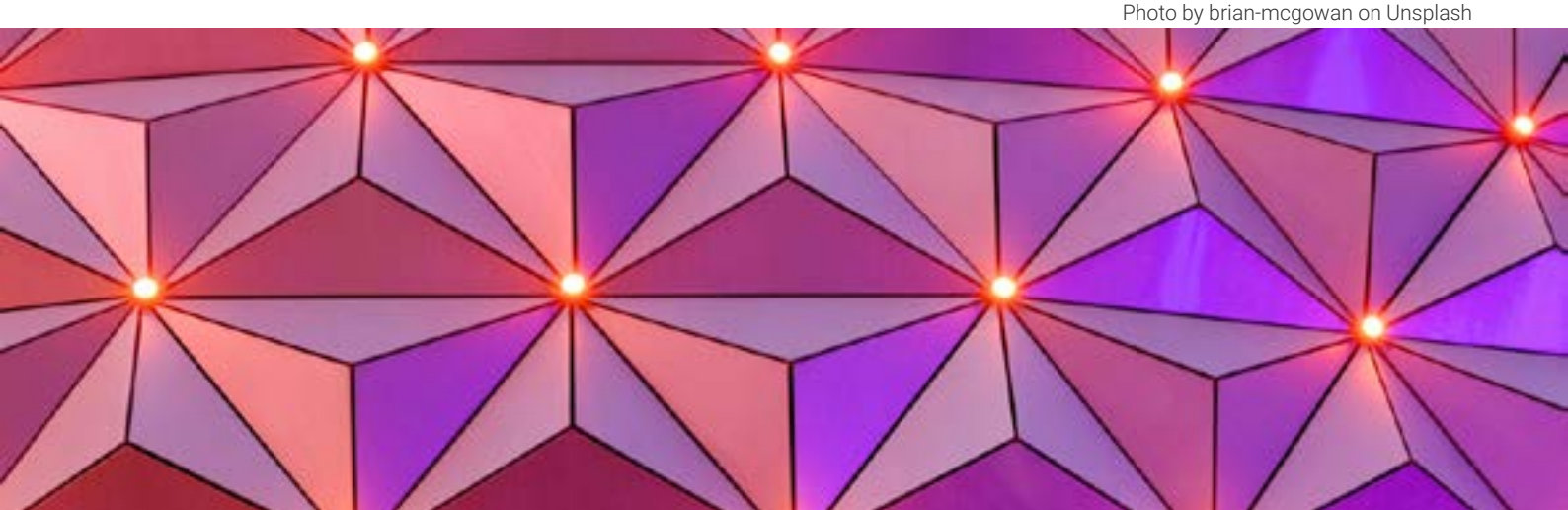




Figure 3. Prof. Xiangen Hu, Chair Professor of Learning Sciences and Technologies, The Hongkong Polytechnic University, giving a keynote speech

Learning Analytics (LA) as the connection for Genai Adoption

Implication

- By prioritizing people over platforms, OCCOS can create a sustainable and inclusive digital learning ecosystem that empowers educators and learners alike.

- Keeping teachers at the heart of AI-driven education ensures ethical, safe, and effective learning.

- By using learning analytics as a governance tool, OCCOS can ensure responsible AI adoption, foster trust, and drive continuous improvement in digital learning.

LA is the “governance glue” connecting pedagogy and policy in the GenAI era, converting interaction data into actionable evidence for ACU partners (Kovanovic, 2025; Paper summarizing seven speakers, 2025).

1. Foundations and Assessment Governance

Federation requires a cross-platform event vocabulary (e.g., enroll, attempt, prompt-submit) and privacy-preserving identifiers (Kovanovic, 2025; Staubitz, 2025). LA also provides governance for dual-track assessment by comparing performance spreads between AI-limited and AI-inclusive tracks to detect anomalies and validity issues (Kovanovic, 2025). Thai MOOC will adapt templates from its LA sessions to codify these evidence requirements (Thai MOOC, 2025).



Figure 4. Prof. Xiangen Hu, Chair Professor of Learning Sciences and Technologies, The Hongkong Polytechnic University, giving a keynote speech

2. LA for GenAI and Data Stewardship

We must track AI interaction footprints to understand whether AI is substituting for or supporting learning and to iterate task design accordingly (Kovanovic, 2025). These findings should feed back into content improvement tools, aligning with AI-enhanced MOOC use cases such as translation and tutoring (Iiyoshi, 2025). Trust is crucial; OCCOS must establish an Analytics Council to review indicators and ensure transparent, learner-facing data notices (Hu, 2025; Paper summarizing seven speakers, 2025).

Micro-Credentials, National Catalog, and Credential Wallet

> ***Implication***
>
> Micro-credentials, unified by a national catalog and digital wallet, are the currency for a mobile, AI-ready ASEAN workforce.

To scale OCCOS, learning must be unitized into quality-assured, machine-readable micro-credentials. The Thai MOOC Academy can anchor this with a national catalog and credential wallet (Praphasrathorn, 2025; Iiyoshi, 2025; Staubitz, 2025).

1. Workforce Relevance and Design Blueprint

Micro-credentials offer targeted learning aligned to job roles and RPL, reducing time-to-value (Praphasrathorn, 2025). Each micro-credential is required to declare specific outcomes and process evidence to preserve validity in an AI era (Kovanovic, 2025; Hu, 2025). They can be grouped into stacks, using GenEd and "AI for Work" tracks as pathways for degree credit (Staubitz, 2025; Thai MOOC, 2025).

2**. Credential Wallet and National Catalog**

A credential wallet for Verifiable Credentials (VCs) and open badges is essential for learner ownership and regional portability (Praphasrathorn, 2025). The National Catalog serves as the source of truth for metadata and stack rules, exposing an API to ACU partners for crosswalks and credit transfer (Thai MOOC, 2025; Staubitz, 2025). A joint TCU-ACU standards board should oversee these schema updates (Paper summarizing seven speakers, 2025).



Figure 5. Asst. Prof. Bowon Praphasrathorn, Executive Director, Knowledge Network Institute of Thailand, addressing a keynote speech

From MOOC to “University-as-a-Service”

> ***Implication***
>
> OCCOS can transform ASEAN into a borderless campus, empowering learners to earn recognized credentials and build careers across the region.

OCCOS can become a region-wide campus by federating catalogs and QA. MOOC ecosystems mature from open courses to credit-bearing transnational programs (Staubitz, 2025; Paper summarizing seven speakers, 2025).

Co-Education and Federation

MOOC tracks can serve degree-seekers and lifelong learners, sharing content and analytics (Staubitz, 2025). “AI for Work” micro-credentials show how one design can support both audiences while maintaining integrity through educator oversight (Thai MOOC, 2025; Hu, 2025). Internationalization depends on interoperability SSO, catalog APIs, and wallets, allowing partners keep local tools while sharing credentials (Staubitz, 2025; Praphasrathorn, 2025).

Micro-credentials function as verifiable “units of learning” that travel via the wallet. They enable stackable progression into degrees governed by shared QA (Praphasrathorn, 2025; Staubitz, 2025; Iiyoshi, 2025). Co-delivered MOOCs with industry mentors align outcomes with jobs while keeping educators in charge of final judgment (Hu, 2025; Dousay, 2025). QA must combine external review with LA dashboards showing mastery gains and equity slices to support accreditation (Iiyoshi, 2025; Kovanovic, 2025; Paper summarizing seven speakers, 2025).



Figure 6. Prof. Thomas Staubitz, Professor for Educational Technology and Social Learning at German University of Digital Science, giving a keynote speech

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JMOOCS AI-Enhanced Roadmap: Standards and Quality

> ***Implication***
>
> By adopting JMOOC's standards and AI-enhanced practices, OCCOS can create a trusted, region-wide credentialing system that empowers learners and educators across ASEAN.

The vision of JMOOCs offers a template for OCCOS: common credential standards for portability paired with AI uses that enhance teachers (Iiyoshi, 2025).

1. Standardization and AI Use Cases

Adopting machine-readable descriptors for learning outcomes and assessment evidence makes credentials discoverable and comparable across ASEAN (Iiyoshi, 2025; Staubitz, 2025). This aligns with Thai MOOC's wallet for smooth RPL (Praphasrathorn, 2025). We propose adopting JMOOC's seven AI use cases, including personalized pathways, translation, tutoring, and quality monitoring, all under educator-in-the-loop control with transparent audit trails (Iiyoshi, 2025; Hu, 2025; Kovanovic, 2025).



Figure 7. Professor Toru Iiyoshi, Kyoto University, JMOOC Director, addressing a keynote speech

2. Evidence-Based Quality

Verifiable learning requires credible evidence. We must pair dual-track assessment with LA indicators to monitor performance and detect integrity issues (Kovanovic, 2025; Hu, 2025). Publishing provider-level metrics on mastery gains and equity will support cross-border recognition decisions (Paper summarizing seven speakers, 2025; Staubitz, 2025).

National-Scale Blended AI Teaching(Medical Curriculum Insights)

> ***Implication***
>
> China's experience proves that with the right safeguards, AI can be safely integrated into high-stakes medical training, creating a powerful "dual-teacher" model for the future.

China's medical education pilots demonstrate that AI-empowered blended teaching scales safely when pedagogy, analytics, and platform engineering align (Wang, 2025).

System Architecture and Pedagogy

The model has evolved from basic MOOCs to "v3.0," where agentic AI tutors scaffold reasoning under educator control (Wang, 2025; Hu, 2025). This requires a platform integrating LRS/LA layers, vetted model endpoints, and credential wallets (Wang, 2025; Praphasrathorn, 2025). Pedagogy relies on dual-track assessment: AI-limited checks for biomedical knowledge and AI-inclusive clinical tasks requiring prompt journals (Kovanovic, 2025; Hu, 2025; Wang, 2025).



Figure 8. Professor Wang Daliang, School of Basic Medical Science, Tsinghua University, giving a keynote speech

Simulation, Safety, and Operations.

Mixed-reality labs on Thai MOOC allow procedure practice, while AI agents can debrief these sessions by spotlighting critical decisions for faculty validation (Thai MOOC, 2025; Wang, 2025; Hu, 2025). In high-stakes fields like medicine, trust is essential; risk controls must include vetted prompt libraries and human verification of clinical recommendations (Kovanovic, 2025; Wang, 2025). Operationalizing this requires defined service-level objectives for AI endpoints and strict data stewardship (Wang, 2025; Hu, 2025).

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Thai MOOC as the ASEAN OCCOS Hub(Operating Model)

> ***Implication***
>
> By establishing Thai MOOC as a central hub, ASEAN can standardize, scale, and secure a region-wide digital learning ecosystem, turning national strengths into shared regional success.

Thai MOOC Academy can serve as the orchestration hub for OCCOS, standardizing catalogs and credentials while ACU partners federate content and local delivery (Paper summarizing seven speakers, 2025; Staubitz, 2025).

Operating Principles and Architecture

The operating model is based on "educators-in-the-loop by default" (Hu, 2025) and "standards-before-scale" to ensure recognition travels (Iiyoshi, 2025; Praphasrathorn, 2025). The core architecture consists of: (1) A National Catalog API as the source of truth for stackable rules (Thai MOOC, 2025; Staubitz, 2025); (2) A Credential Wallet for learner-owned VCs (Praphasrathorn, 2025); (3) A Learning Analytics Layer for governance and integrity signals (Kovanovic, 2025); and (4) AI Services (translation, tutoring) under human control (Iiyoshi, 2025; Hu, 2025).

Services, Governance, and Roadmap

TCU/Thai MOOC can provide ACU nodes with onboarding kits containing schema validators and integrity playbooks (Hu, 2025; Kovanovic, 2025). We will offer co-branded stacks (e.g., GenAI for Work, MR-STEM) ready for local deployment (Thai MOOC, 2025). Governance will be handled by a joint TCU-ACU Standards Board and an Analytics Council (Iiyoshi, 2025; Kovanovic, 2025; Paper summarizing seven speakers, 2025).

- Phase 1 (Q1-Q2) : Freeze schemas, pilot two co-branded stacks with wallets and dual-track assessment (Thai MOOC, 2025; Praphasrathorn, 2025; Kovanovic, 2025)
- Phase 2 (Q3-Q4) : Launch educator dashboards and CPD badges, and initiate external QA (Hu, 2025; Iiyoshi, 2025)
- Phase 3 (Q5-Q6) : Expand ACU credit tables and release the first OCCOS Mobility & Integrity Report (Staubitz, 2025; Paper summarizing seven speakers, 2025)

Conclusion

> ***Implication***
>
> By centering people in its digital architecture, OCCOS can forge a truly inclusive ASEAN learning community—a future where every citizen, regardless of location or background, has the trusted pathways and recognized skills to thrive in a borderless digital economy.

A people-first OCCOS is not merely a technological upgrade; it is a foundational commitment to making ASEAN a globally inclusive learning region. Its success hinges on institutionalizing human-centered policies that amplify educator judgment (Dousay, 2025; Hu, 2025), deploying learning analytics as the essential governance bridge for responsible GenAI adoption (Kovanovic, 2025), and establishing micro-credentials and digital wallets as the unified backbone for regional mobility (Praphasrathorn, 2025; Staubitz, 2025). By adopting interoperable standards aligned with JMOOC's vision (Iiyoshi, 2025) and scaling lessons from national blended exemplars (Wang, 2025), we can build a system that is both trusted and transformative. TCU and Thai MOOC Academy invite ACU and all regional partners to co-create this federated OCCOS, empowering the people we serve to carry their learning—trusted, portable, and recognized—across every border, now and into the future (Staubitz, 2025; Praphasrathorn, 2025; Iiyoshi, 2025; Kovanovic, 2025; Hu, 2025; Wang, 2025; Thai MOOC, 2025).

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Institutional and Strategic Foundations of ASEAN Cyber University (ACU): Korea's Vision and Support Framework

Jieun Hong / Chung-Ang University

Abstract

This report explores the sustainability of the ASEAN Cyber University (ACU) by drawing lessons from Korea's experience in institutionalizing online higher education. Korea's model emphasizes three pillars—legal frameworks, standardized public LMS, and multi-level financial governance. Formal recognition of cyber universities and platform standardization ensured quality and interoperability, while strategic public investment guaranteed long-term viability. The KEKA-K-MOOC case exemplifies how institutional assurance and national coordination build both credibility and global reach. These insights suggest ACU should pursue legal harmonization, shared platform standards, and cross-country governance to ensure sustainable and academically legitimate digital learning across ASEAN.

Keywords

#PlatformStandardization #Institutionalization #QualityAssurance

Introduction

For online higher education platforms such as the ASEAN Cyber University (ACU) to be sustainable and credible, legal institutionalization is not a supplementary condition, but a fundamental prerequisite. In this context, the Korean experience offers a relevant and instructive model. Korea began officially recognizing cyber universities as a legitimate form of higher education in the early 2000s. This policy recognition was not symbolic—it provided the legal and administrative framework for cyber universities to offer full degree programs equivalent to those of traditional institutions.

Over the past two decades, Korea has gradually built a robust regulatory ecosystem around online education. A landmark step came with the revision of the Enforcement Decree of the Higher Education Act, which clarified the credit-bearing status of online learning and emphasized quality control across higher education institutions. In particular, the Standards for the Operation of University Distance Learning Courses—revised in 2022—laid out specific and binding requirements regarding instructional interaction, credit limits for online components, and mandatory LMS certification procedures for institutions. This legislative framework effectively positioned online courses as a formal and regulated component of degree programs, rather than as supplementary or peripheral offerings.

This legal clarity has had a cascading effect across institutional practices: universities have adjusted their internal regulations, enhanced LMS capabilities, and formalized online teaching as a core part of their academic strategies. Importantly, Korea's regulatory approach does not only stipulate quality standards but also operational norms. For example, it requires institutions to ensure a minimum level of real-time interaction, monitor student participation, and conduct systematic evaluations of digital platforms.

For ASEAN countries seeking to institutionalize the ACU platform, the Korean model highlights three critical policy directions. First, national legislation must explicitly define the academic status of online courses and establish mechanisms to integrate them into formal degree programs. Second, a common regional guideline may be needed to harmonize credit recognition and quality standards across member countries. Third, public authorities must play an enabling role—not just in setting policies but in offering infrastructural and regulatory support for institutions transitioning toward digital modes.

As the ACU moves toward a more structured and scalable model of collaborative online learning, legal formalization within each participating country will be indispensable. Without it, course accreditation, faculty recognition, and student mobility across the region will remain ad hoc and fragmented. The Korean case demonstrates that long-term sustainability for cyber universities does not solely depend on technology or content quality, but equally on legal infrastructure that grants legitimacy and stability to digital education systems.

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Public LMS Standardization: The KERIS Model from Korea

For an online collaborative curriculum system like the ASEAN Cyber University (ACU) to function as a sustainable and credible platform, one of the most fundamental prerequisites is its integration into the national higher education legal framework. Without a clearly defined legal status, online courses risk being treated as auxiliary or informal educational content, rather than as core components of accredited degree programs. In this context, Korea offers a valuable case study of how online higher education—particularly cyber universities—can be institutionalized and systematically supported through legal and policy reforms.

Korea began formally recognizing cyber universities in the early 2000s through amendments to the Higher Education Act, allowing them to operate as accredited institutions offering full degree programs via remote learning. More recently, regulatory frameworks have been significantly updated to reflect the evolving landscape of online education. A key milestone was the 2022 revision of the "Standards for University Remote Class Operations", which legally codified several critical components: the proportion of remote classes within formal curricula, the standards for instructor–learner interaction, and the certification criteria for Learning Management Systems (LMS). These measures have elevated the legitimacy of online learning, not as a temporary alternative, but as a central delivery method in Korea's higher education system.

This institutional architecture offers important implications for ACU. ASEAN member states must consider similarly embedding online learning into their higher education acts and creating nationally endorsed operational guidelines. Such standardization is essential not only for academic recognition across member states but also for ensuring that ACU's offerings are scalable, interoperable, and aligned with regional accreditation systems

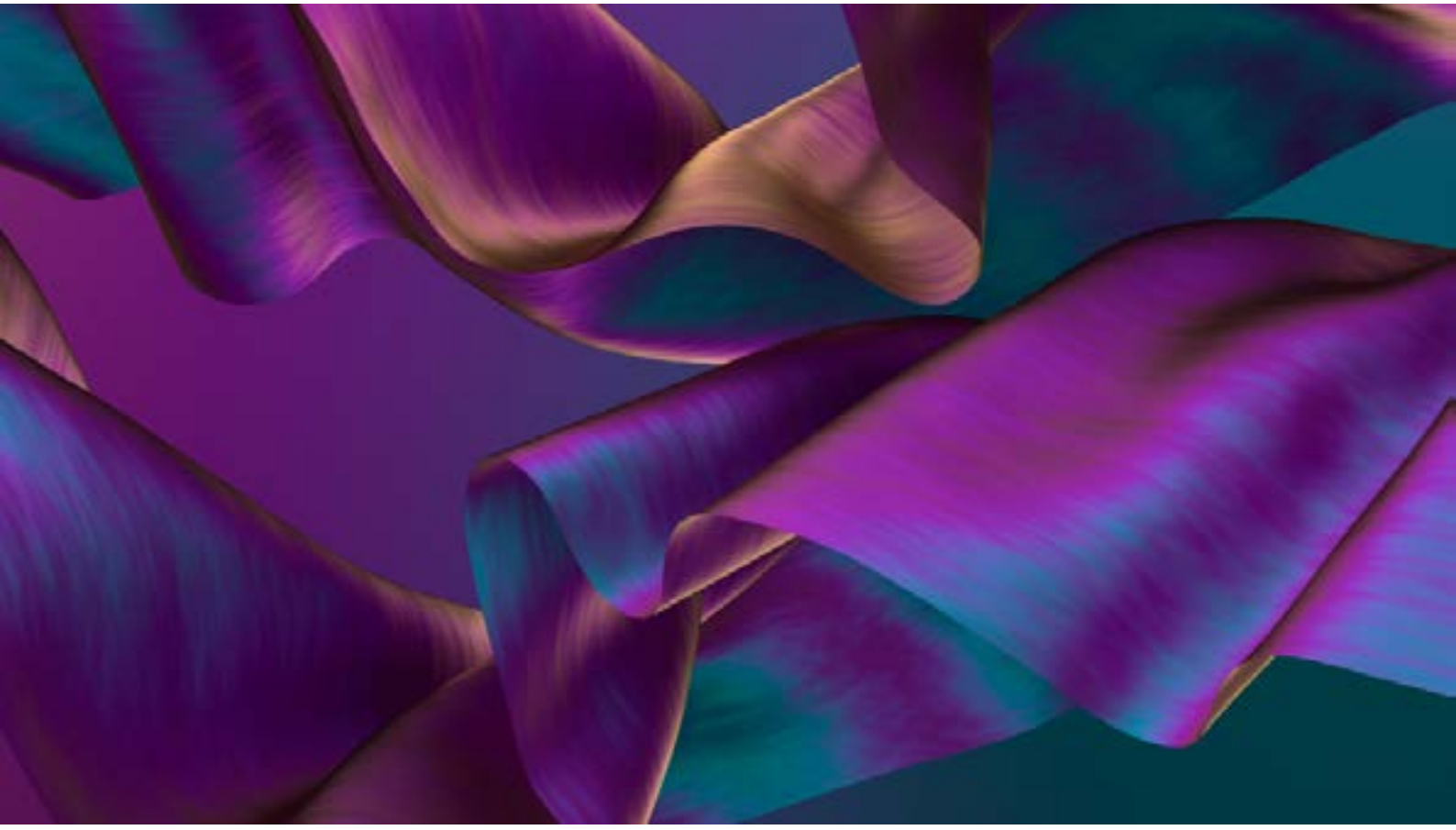


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Multi-Tiered Financial Support and Governance for Sustainable Operations

The long-term viability of a regional online curriculum platform such as the ASEAN Cyber University (ACU) depends not only on its initial design and content development, but also on its ability to sustain operations, evolve technologically, and respond to changing educational demands. A fundamental insight drawn from Korea's experience is that digital higher education infrastructure cannot be approached as a one-off project; rather, it requires stable, multi-year financial commitments and a governance structure capable of coordinating complex and evolving demands.

Since 2022, Korea has pursued a systemic approach to digital higher education through two major initiatives: the University Innovation Support Project and the Digital-Based Higher Education Innovation Project. Together, these programs provide annual investments amounting to tens of billions of Korean won. These funds are used not only to support the creation of high-quality online lectures, but also to upgrade Learning Management Systems (LMS), train educators in digital pedagogy, and ensure quality assurance mechanisms are in place (Ministry of Education, 2022). Importantly, the funding covers the full life cycle of digital course offerings—from initial design to long-term maintenance and platform integration. For instance, a single high-quality lecture can receive a development grant exceeding 20 million KRW (approximately USD 15,000), with separate allocations for ongoing maintenance, bug fixes, accessibility improvements, and multi-platform adaptation (KCUE, 2023). This reflects the understanding that quality online education is not a static product but a dynamic service that must evolve alongside technological advances and learner expectations.

Another crucial lesson from Korea is the importance of functionally segmented budgeting. Rather than concentrating resources solely on content development, Korea's model divides funding across key domains such as infrastructure, software licensing, cybersecurity, faculty training, multilingual translation, and user support. This allows each component of the online education ecosystem to receive targeted support and ensures that no critical element—such as LMS compatibility or accessibility services—is neglected.

In the context of ACU, adopting such a segmented and tiered financial model is not only advisable but necessary. Without deliberate investment in areas such as server capacity, cybersecurity protocols, instructional design support, and multilingual content adaptation, the platform risks being underutilized or unsustainable. Furthermore, robust and periodic evaluation frameworks should be institutionalized to monitor and recalibrate funding priorities as ACU matures.

Sustainability also hinges on the governance structure that underpins the platform. Korea's experience demonstrates the importance of centralized yet flexible coordination. The Ministry of Education sets annual priorities and performance benchmarks while allowing universities to design their own implementation strategies within a national framework. Translating this model into a regional context would require coordination among the ASEAN Secretariat, national higher education ministries, and participating universities. Equally important is the establishment of a burden-sharing arrangement among member states to ensure equitable contribution and ownership. This could take the form of a rotating funding mechanism, a shared service model, or integration with multilateral donors.

Ultimately, if ACU is to serve as a resilient and inclusive regional platform for online higher education, it must move beyond a pilot project mindset. A long-term roadmap for institutionalization must be established—one that includes sustainable funding streams, a distributed governance model, and an ongoing commitment to digital equity across all member states.

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Conclusion

The ASEAN Cyber University (ACU) initiative represents a bold and timely attempt to establish a shared regional infrastructure for online higher education. However, its long-term viability and relevance depend on more than technological deployment or pilot content creation. As shown through Korea's experience, sustainability arises from a convergence of four critical factors: legal institutionalization, standardized infrastructure, stable financial and governance systems, and robust quality assurance mechanisms.

First, the Korean case underscores that legal formalization is the cornerstone of sustainable online higher education. Korea's revision of its Higher Education Act and related decrees established online learning as an accredited, regulated, and mainstream component of higher education. Without such legislative backing, online courses risk being marginalized or inconsistently recognized. For ACU to function as a regionally integrated degree-granting platform, ASEAN member states must embed the platform's legitimacy into their own national laws and academic qualification frameworks.

Second, the implementation of a standardized, publicly recognized Learning Management System (LMS), as exemplified by Korea's KERIS LMS certification model, is essential for ensuring interoperability, data security, and quality control. Korea's efforts to formalize LMS standards through national-level evaluation and support schemes offer a practical blueprint for ACU. A common LMS platform, jointly managed or federated across ASEAN, would not only improve operational consistency but also facilitate cross-border credit recognition and faculty collaboration.

Third, financial sustainability must be institutionalized rather than project-based. Korea's multi-year funding approach, with functionally segmented budgets covering platform infrastructure, content updates, faculty training, and multilingual support, shows how stable investment can support adaptive and inclusive growth. For ACU, this implies the need for a pooled financing model involving both ASEAN Secretariat coordination and national contributions, with clear governance and accountability structures.

Finally, quality assurance cannot be treated as a final-stage task or left to individual instructors. Instead, as seen in Korea's KEKA and K-MOOC initiatives, course design, evaluation, accessibility, and multilingual adaptation must be embedded as institutional processes. Faculty participation, internal review systems, and continuous feedback loops all contribute to the academic credibility and learner satisfaction essential to a transnational digital platform like ACU.

In sum, the ACU's ambition to function as a sustainable online higher education platform requires a paradigm shift—from one-time projects to institutionalized systems; from isolated pilot efforts to interoperable regional frameworks; and from content delivery to quality-centric ecosystems. Korea's policy and institutional experiences offer not a one-size-fits-all solution but a coherent reference model adaptable to ASEAN's diverse needs and capacities. Embedding these principles into the future roadmap of ACU will be indispensable to realizing its vision of inclusive, high-quality, and regionally integrated online higher education.

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ACU PROJECT

To support freely accessible, high-quality online teaching and learning materials and services.
To improve open online higher education resources in ASEAN member states.
To broaden higher education networks between South Korea and ASEAN through exchanging online academic resources.

Thank .you

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