

2023 Trend Report

Higher Education & e-learning in ASEAN

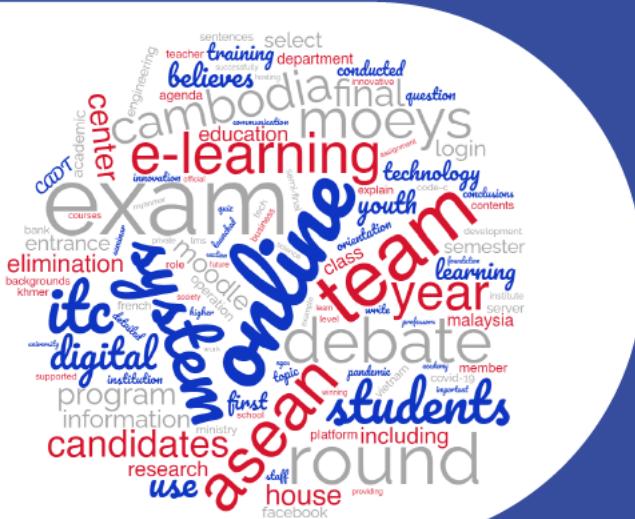
Vol. 1



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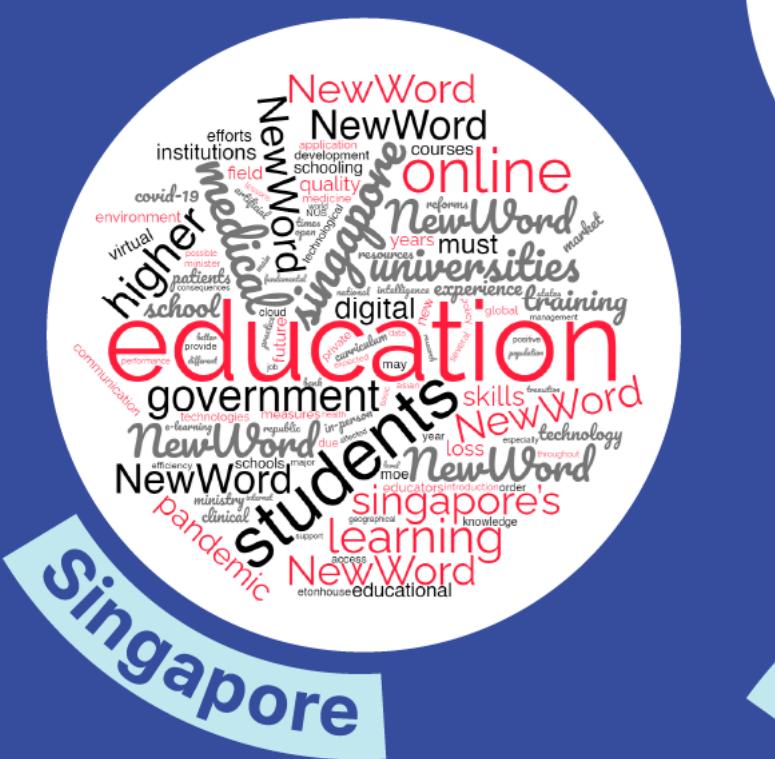
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01

Advances in technology and changes in education

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“Harnessing the Power of ChatGPT for Education” online Training Event by TET Myanmar

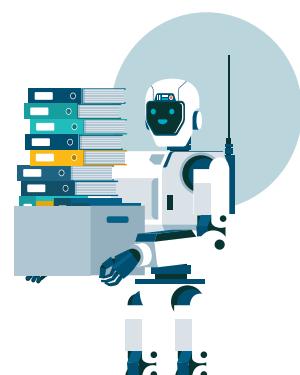
#Artificial Intelligence #Education
#ChatGPT #Plagiarism

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The growing presence of artificial intelligence (AI) in education has captured the attention of educators worldwide. With rapid advancements in AI technologies, educational institutions now offer training programs and discussions on effectively using AI in education. This has made AI an essential resource for improving teaching methods and learning experiences, leading to more personalized and efficient educational systems.

TET Myanmar, a non-profit social educational enterprise, seeks to transform education in Myanmar by helping teachers reach their full potential, thus paving the way for a better future for the next generation. To achieve this, TET Myanmar hosted an online training event centered on using ChatGPT in education. The event aimed to showcase the potential of Artificial Intelligence (AI)-powered language models for enhancing learning experiences across various educational institutions in Myanmar. There were over 300 participants in the training. The event received overwhelmingly positive feedback from participants, including those from higher education institutions, PreK-12 schools, language training centers, non-governmental organizations and freelance teachers. They found the discussions on the role of AI in the future of education, rethinking plagiarism and cheating in light of AI advancements, and other AI tools in education particularly valuable. Even though the event was highly praised, some attendees were worried about the need for better internet and technology access to fully benefit from AI-powered tools like ChatGPT. Educators, in particular, were concerned about students relying too much on AI tools for their schoolwork.

The training session primarily centered on exploring the following topics related to AI in education:

- Introduction to ChatGPT
- AI Detectors and their Reliability
- Plagiarism and Cheating (Rethinking)
- ChatGPT for higher education
- Other AI tools
- The future of AI in education

“Harnessing the power of ChatGPT for Education”

ChatGPT: Brief Introduction (Education)

- ChatGPT is an AI-powered chatbot designed to answer questions and provide information to users in a conversational manner.
- It can be used for personal and learning experiences.
- It can be used to answer questions, create stories, generate code, and more.
- It can also generate codes for computer programs.

by Si Thu Wai

TET Teachers Empower Teachers

Figure 1. A screenshot of the online training event on ChatGPT by TET Myanmar

01

Introduction to ChatGPT

According to ChatGPT is an AI-powered language model developed by OpenAI Company that can understand and generate human-like language [1]. It has the ability to perform various language-related tasks and is particularly useful for generating responses to open-ended questions or prompts in the field of education. The latest model of ChatGPT, GPT-4, is more precise and can ace the Uniform Bar Exam, calculate tax liability, and describe images in detail [2].

02

AI Detectors and their Reliability

With the increased use of AI tools in education, the need for AI detectors to ensure academic integrity has also grown. However, there are concerns about the reliability of these detectors in accurately detecting plagiarism and cheating. Several well-known AI detectors currently exist in the market, including AI Text Classifier by OpenAI (created by the developers of ChatGPT), GPTZero (an AI tool designed by a college student for educators), Fictitious.ai (an AI detector that integrates with Canvas LMS), and AI Writing Check (a free service provided by Quill and CommonLit). In the paper "Can AI-Generated Text be Reliably Detected?" [3], researchers argue that the unregulated use of large language models (LLMs) in widely used applications from major technology companies may lead to negative consequences such as sophisticated spam, fake news, inaccurate summaries, and plagiarism. Paraphrasing attacks can easily avoid detection by AI detectors, degrading their accuracy to as low as 57%. It is impossible for AI-generated text detection problems to be reliably solved in practical scenarios. Watermarking schemes designed to safeguard LLMs can be prone to spoofing attacks, which can result in false accusations of spamming or plagiarism. As a result, it may not be possible to reliably determine if a text is written by a human or an AI, and verification of the source of text through other information may be necessary.

03

Plagiarism and Cheating (Rethinking)

The rise of AI tools has led to a rethinking of traditional notions of plagiarism and cheating. As AI tools become more prevalent, educators must consider how to redefine academic integrity in light of these advancements.

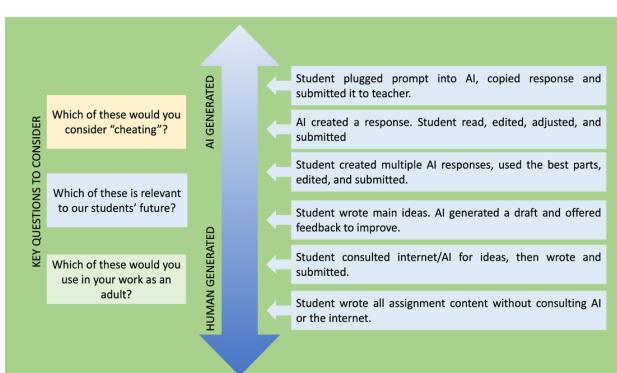


Figure 2. Exploring the changing definition of cheating and plagiarism in education in light of AI advancements

In Fig.2 based on [4], which among these actions would be deemed as "cheating" or "plagiarism"? The answer to this question must consider the future of education and the evolving role of AI in the workforce.

As AI technology advances, it is vital to evaluate current educational practices and contemplate how to adjust to this ever-changing field. Despite the challenge of determining the proper use of AI tools in education, engaging in these conversations is critical to adequately preparing students for what lies ahead.

04

ChatGPT for Higher Education

The paper [5] addresses "ChatGPT" as a co-author of the paper, and discusses AI chatbots and their potential uses and risks in nursing education, including personalized learning and plagiarism prevention. ChatGPT has potential applications in higher education, including providing personalized learning experiences, assisting with research and writing, and answering student inquiries. However, ChatGPT's ability to generate accurate citations and information on a research topic is limited, as it is a machine learning system that is constantly learning and improving its language generation capabilities.

When prompted to produce a literature review on a specific research topic, ChatGPT is not able to consistently provide accurate citations and information. The citations and information produced by ChatGPT are often subject to errors, highlighting the need for human oversight to ensure accuracy and reliability. Although ChatGPT has released its updated version, GPT-4, which is said to provide more accurate citations and information, it is still not flawless and requires human supervision. Additionally, access to GPT-4 may be limited for users.

Despite its limitations in generating accurate citations and information, ChatGPT can assist with various tasks such as paraphrasing ideas, creating outlines for presentations, summarizing research papers, and providing feedback on essays. It is worth noting that ChatGPT can also generate computer programming codes, and with the release of GPT-4, it has the ability to analyze pictures, although this feature is not yet available to the general public.

05

Other AI Tools in Education

There is an abundance of AI tools and platforms that are powered by artificial intelligence not only in K-12 education but also in higher education. Here are some examples:

- Coursera ([coursera.org](https://www.coursera.org)): A massive open online course (MOOC) platform that offers courses from top universities worldwide. Coursera uses AI to personalize learning experiences and recommend courses to students based on their goals and interests.
- EdX ([edx.org](https://www.edx.org)): Similar to Coursera, EdX is a MOOC platform that provides access to courses from top institutions. EdX leverages AI to create personalized learning paths and recommend relevant courses to users.
- Turnitin ([turnitin.com](https://www.turnitin.com)): An AI-driven plagiarism detection tool that helps maintain academic integrity in higher education institutions. Turnitin uses machine learning algorithms to identify instances of plagiarism in student work and provide feedback on citations and referencing.
- Writefull ([writefull.com](https://www.writefull.com)): An AI-powered writing assistant that helps students and researchers improve their academic writing. Writefull provides feedback on grammar, style, and usage, enabling users to create clear and concise documents.
- Grammarly ([grammarly.com](https://www.grammarly.com)): A widely-used AI-driven writing assistant that checks for grammar, punctuation, and style errors. Grammarly offers a premium version tailored for academic writing, which includes advanced suggestions and plagiarism detection.

- Gradescope (gradescope.com): An AI-driven platform that streamlines the grading process for educators, allowing them to provide consistent, timely, and accurate feedback to students. The platform supports various assessment formats, including exams, homework, and programming assignments.
- Cognii (cognii.com): An AI-powered platform that uses natural language processing to provide personalized tutoring and assessment. Cognii can evaluate open-response answers, provide instant feedback, and generate analytics to help educators improve their teaching methods.

06

AI Detectors and their Reliability

With the increased use of AI tools in education, the need for AI detectors to ensure academic integrity has also grown. However, there are concerns about the reliability of these detectors in accurately detecting plagiarism and cheating. Several well-known AI detectors currently exist in the market, including AI Text Classifier by OpenAI (created by the developers of ChatGPT), GPTZero (an AI tool designed by a college student for educators), Fictitious.ai (an AI detector that integrates with Canvas LMS), and AI Writing Check (a free service provided by Quill and CommonLit). In the paper "Can AI-Generated Text be Reliably Detected?" [3], researchers argue that the unregulated use of large language models (LLMs) in widely used applications from major technology companies may lead to negative consequences such as sophisticated spam, fake news, inaccurate summaries, and plagiarism. Paraphrasing attacks can easily avoid detection by AI detectors, degrading their accuracy to as low as 57%. It is impossible for AI-generated text detection problems to be reliably solved in practical scenarios. Watermarking schemes designed to safeguard LLMs can be prone to spoofing attacks, which can result in false accusations of spamming or plagiarism. As a result, it may not be possible to reliably determine if a text is written by a human or an AI, and verification of the source of text through other information may be necessary.

Implications

In conclusion, the "Harnessing the Power of ChatGPT for Education" online training event organized by TET Myanmar successfully illustrated the potential of AI-driven language models, such as ChatGPT, to transform educational practices across various institutions in Myanmar. Participants from diverse educational backgrounds expressed appreciation for the insightful discussions surrounding AI's role in the future of education, plagiarism, and cheating in the context of AI, and other AI tools in education. While the event received widespread praise, concerns were raised about the need for improved internet and technology access and the possibility of students relying excessively on AI tools for their academic work. As AI continues to reshape the educational landscape, it is crucial for educators, technologists, and policymakers to collaborate and address these concerns, ensuring the responsible and equitable integration of AI-driven tools in the learning process.

References

- <https://openai.com/blog/chatgpt>
- C. Metz, The New York Times (2023). <https://www.nytimes.com/2023/03/14/technology/openai-gpt4-chatgpt.html>
- V.S. Sadasivan, A. Kumar, S. Balasubramanian, W. Wang, S. Feizi, (2023). <https://arxiv.org/abs/2303.11156>
- <https://ditchthattextbook.com/ai-edu/>
- S. O'Connor, ChatGPT, *Nurse Education in Practice* 66 (2023) 103537. DOI: 10.1016/j.nepr.2022.103537
- S.M. Kelly, CNN (2023). <https://edition.cnn.com/2023/03/29/tech/ai-letter-elon-musk-tech-leaders/index.html>
- <https://openai.com/product/gpt-4>

The Singaporean Government's Attempt to Integrate Chat GPT with Education

#Chat GPT #Educational Integration #AI #Learning Tool

Mr. Wooyong Shin / Yonsei University



Singapore's Education Minister, Chan Chun Sing, announced plans to integrate ChatGPT into the country's schools and higher education institutions to enhance learning among students, with the Ministry of Education guiding teachers on how to use AI tools responsibly. Singaporean educators believe that AI tools are useful as long as they are appropriately used and aim to equip students with the skills to use AI tools responsibly. Meanwhile, Singapore's higher education institutions have diverse assessment modes to prevent cheating using AI, including software like Turnitin to detect academic dishonesty.

01

ChatGPT, Embraced and Not Avoided in Singapore

The ChatGPT service has achieved a remarkable feat of garnering over 100 million users in just two months, making it the fastest-growing technology worldwide. Despite attempts by France and Australia to limit ChatGPT to educational use in their regions, Singapore has taken a different approach. On February 12th, 2023, the Singaporean government announced plans to integrate ChatGPT into the country's schools and higher education institutions.

The local newspaper The Strait Times reported that Singapore's Education Minister Chan Chun Sing informed the Parliament that there are discussions among educators exploring the use of AI tools to enhance learning among students. The Singaporean Ministry of Education (MOE) is guiding teachers on how to use AI tools such as ChatGPT to improve learning, given their potential to become widely adopted.

The Minister compared ChatGPT to a calculator, stating that it can be a valuable learning tool for students once they have grasped fundamental concepts and thinking skills. The Singaporean MOE aims to equip students with the skills to use AI tools responsibly, he added.

The Minister also noted that skills such as self-directed and collaborative learning and inventive thinking cannot be easily replaced by technological tools. These skills are acquired through leadership roles, interdisciplinary project work, and experiential learning.

The dominant voice in the education field of Singapore is that AI tools are useful as long as they are appropriately used. The spokesperson of SMU (Singapore Management University) stated, "We believe that AI tools are here to stay and will be increasingly present in our everyday lives. Our response is not to shy away from them, but to assess how we can harness the best of what AI tools can offer, and at the same time adapt the way we teach and conduct assessments to prevent misuse."

Meanwhile, the spokesperson of NTU (Nanyang Technological University) also asserted: "We are looking into how we can equip our students with the skills to make use of such technological aids in creative, critical, and ethical ways, while making sure students continue to develop the necessary critical cognitive skills."

In the case of Mr. Jonathan Sim, a lecturer from the department of philosophy at the National University of Singapore, his students are soon to be educated on generating reports through the ChatGPT program along with assessing the outputs themselves. He also observed that students ask ChatGPT basic questions that they may be too shy to ask in person and then turn to their human educators for more advanced help. Perhaps this could be an ideal direction to lead less outgoing students to climb over their barriers to reach higher levels of education.

Furthermore, the lecturer believes that students cheat because they do not see the value in their assignments and suggests educators explain why assignments are designed the way they are to encourage seriousness. He also suggests encouraging transparency by allowing students to indicate portions of their assignments generated by ChatGPT and expanding the plagiarism-detection repository with AI-generated outputs.

Regarding measures to prevent cheating using AI, the Education Minister said that the country's higher education institutions have diverse assessment modes, including exams, presentations, and projects, which require analytical skills, field notes, and observational details that cannot be generated easily by AI technology.

For instance, universities in Singapore employ software like Turnitin to detect academic dishonesty. Turnitin uses a database of around 2 billion student papers and internet content to detect plagiarism, and it also employs a "fingerprint" technology to identify a student's writing style. This technology can be useful in identifying instances of academic fraud, such as papers written by ghostwriters, and the software is being upgraded to detect essays generated by chatbots. If a student's work is suspected of being generated by AI, universities will initiate an investigation, and penalties for academic dishonesty may include a grade reduction, course failure, or, in severe cases, suspension or expulsion.

On a side note, Singapore is the first country in the world to express a clear policy in favor of implementing AI tools such as ChatGPT into its education system. Its education has ranked first in math and science subjects in the Trends in International Mathematics and Science Study (TIMSS) since 2015, administered by the non-profit research cooperative International Association for the Evaluation of Educational Achievement based in Amsterdam. Additionally, the National University of Singapore is the highest-ranked university in Asia and 11th globally, according to QS World University Rankings 2023.

Implications

Singapore's response to developing AI tools is quite different from that of other nations. While acknowledging the potential benefits that can be drawn from using ChatGPT, the nation's educators are continuously contemplating establishing appropriate measures to prevent the abuse of the tool that could undermine individual learning. Nevertheless, this is a notable act by the Singaporean government as the adoption of an AI tool by one of the forerunning education could eventually impact the decisions of other countries in the future when it comes to integrating AI tools into education.

References

Hui, Tan Si, and Darrelle Ng. "How Can Singapore's Universities Deter AI-Assisted Cheating in the Age of Chatgpt?" CNA, 27 Feb. 2023, <https://www.channelnewsasia.com/singapore/chatgpt-openai-chatbot-education-universities-schools-students-3309201>.

Wong, Leo. "Singaporean Government Planning to Officially Teach Students How to Use CHATGPT." Gizmochina, 22 Feb. 2023, <https://www.gizmochina.com/2023/02/22/singapore-students-chatgpt/>.

Today, Charlene Goh. "University Professors in Singapore Keen on CHATGPT, Which They Say Can Help Students Ask Better Questions and Raise Critical ThinkingC." TODAY, 7 Feb. 2023, <https://www.todayonline.com/singapore/university-professors-singapore-keen-chatgpt-which-they-say-can-help-students-ask-better-questions-and-raise-critical-thinking-2102461>.

Towards applying Robotic Process Automation for Vietnam higher education from the perspective of lecturers

#Process Automation #Robotic Process Automation
#RPA #Higher Education

Mr. Chu Van Huy / Banking Academy of Vietnam



Higher education in Vietnam is facing challenges related to the increasing workload of administration, training and student support activities. This report provides a basic understanding, towards applying Robotic Process Automation (RPA) technology to support training activities from the perspective of lecturers.

01

What is Automation? What is the role of Robotic Process Automation?

In May 2022, we received an order for advanced digital competency training for lecturers at some universities in the northern part of Vietnam. After completing each course, we conduct an assessment of their digital competence at the end of the course based on The Digital Competence Wheel developed by Center for Digital Dannelse (survey conducted from May 27, 2022 - March 26, 2023). 282 lecturers participated in the above 8 courses, they have been participating in teaching at universities; they teach for many training systems such as doctor of philosophy, master, bachelor, college; they have experience in different pedagogical environments; they have accumulated rich digital capabilities. Through the survey results, we found that their weakest point is the ability to perform "automation".

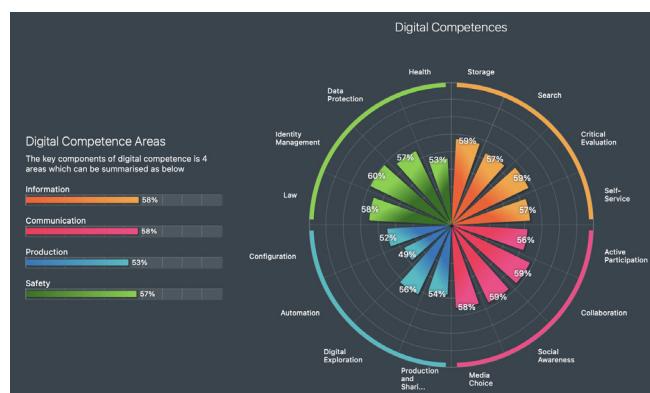


Figure 1.
Results of the survey on digital competences of lecturers at some universities in the North of Vietnam

Automation can be known as "The ability to create or modify digital solutions that can fully or partially automate a task". For example, the process of automatically sending a student score notification to ensure privacy can be implemented as described in Table 1 below.

Step	Lecturers (Lecturers will use their eyes to see the data stream of student information prepared in the Excel File)	Automation solution (It will read the data stream of student information prepared in the Excel File)
1	Manually press compose Email button	Automatically press compose Email button
2	Manually type the email address of each student in the To field	Automatically type the email address of each student in the To field
3	Manually type the title of the student's score announcement to ensure privacy in the Subject field	Automatically type the title of the student's score announcement to ensure privacy in the Subject field
4	Manually type details about student's score in the Body field	Automatically type details about student's score in the Body field
5	Manually press the Send Email button	Automatically press the Send Email button

Table 1. An example of a comparison between manual tasks and automation tasks

Thus, if schools want to reduce the above weaknesses, they need to step-by-step improve their ability to implement "automation". Figure 2 describes the levels of automation capabilities that schools can aim to achieve. In fact, most of the lecturers who conducted the above survey are at level 2. [1]

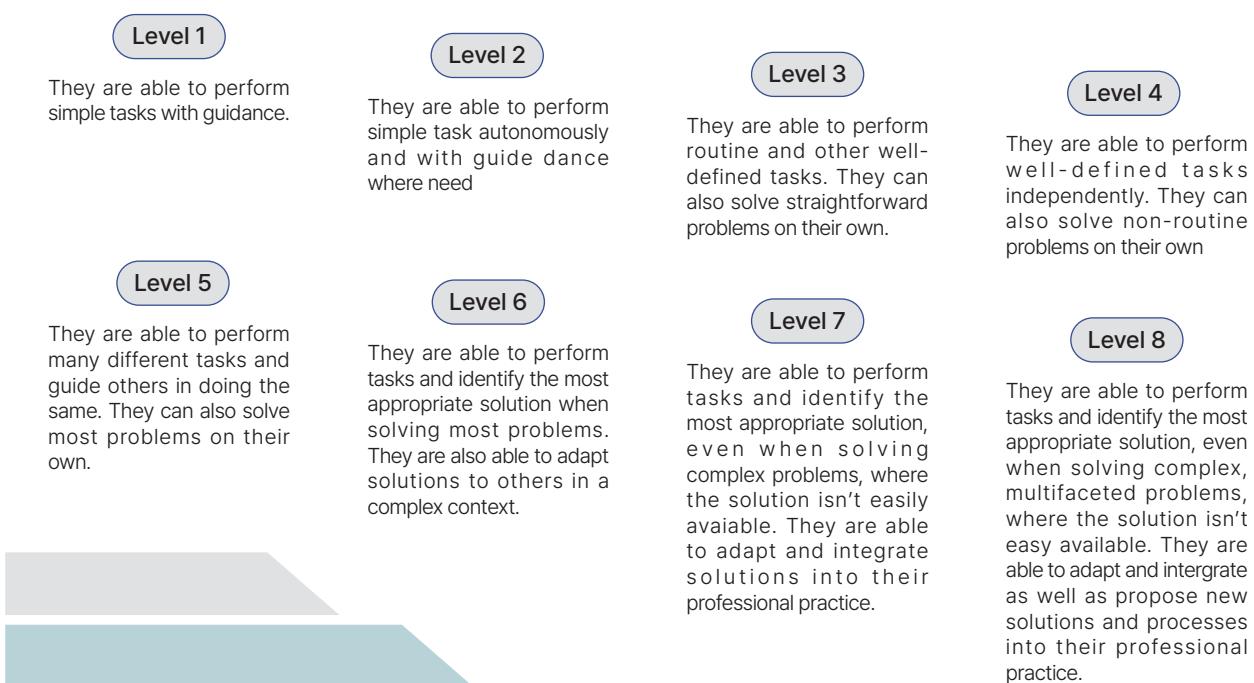


Figure 2. The levels of automation capabilities that schools can aim to achieve

So how can teachers improve automation capacity? The right solution that can be chosen is to use RPA. RPA has become a buzzword in discussions of disruptive technologies that can be used in the fourth industrial revolution, seen as a technology that enhances automation capabilities in many fields. RPA is understood as the use of special software programs commonly known as software robots (Software Robots, SoftBots or Bots) as a "virtualized workforce" to perform routine tasks of humans. The basic principle that allows RPA to replace humans is to mimic the repetitive tasks of human manipulating computer systems.

Implications

The first job that needs to be done is to discover, identify and evaluate whether specific tasks (tasks that interact with the computer system) in the business process of staff can be performed by automation? And then, it can be solved by RPA solutions (RPAs) to help reduce time and effort, increase the level of user satisfaction, spend time optimizing processes and create a lot of new valuable knowledge.

03

Suggest some use cases using RPA for Vietnam Higher Education from the perspective of lecturers

For lecturers, one of the key tasks is to do well in teaching and supporting students. In order to reduce the workload, trainers will need to prepare the ability to automate some tasks when interacting with computer-based information systems. Immediately after that, it is necessary to carefully arrange the implementation steps towards maximizing the steps that can be automated based on the use of RPA technology. Table 2 describes some useful experimental cases of applying RPA solutions for Vietnam higher education from the perspective of lecturers. [2], [3], [4].

Table 2. An example of a comparison between manual tasks and automation tasks

Use case	Interacting with the System	Description	Step-by-Step Process for RPA solution (RPAs)
Send academic alerts to each student	Email	<p>RPAs can be used to automatically send a number of privacy-related student alerts, such as:</p> <ul style="list-style-type: none">• Send a warning about the number of days allowed to be absent by school rules.• Send reminders for missing documents.• Send reminders about the upcoming exams.• Send a private message to each student via Email.• Send each student's private scores via Email.• Etc.	<ul style="list-style-type: none">• Step 1 RPAs automatically scan Excel File with data to send warning information related to students (unified put File containing data to be sent in a certain folder).• Step 2 RPAs read the data fields in the Excel File.• Step 3 RPAs automatically open the composing feature and fill in the corresponding fields in the Excel File in the fields (To, CC, Subject, Content).• Step 4 RPAs automatically press the button to send email notifications to students.

- Experimental location: In classes taught by the author at Banking Academy of Vietnam, National Economics University, East Asia University of Technology.
- Experimental scale: 12 classes (average 50-70 students/class), academic year 2022-2023.
- Evaluation of experimental results: Students feel satisfied when receiving notices, reminders, warnings,... proactively from the lecturer.

Use case	Interacting with the System	Description	Step-by-Step Process for RPA solution (RPAs)
Analyze course information related to each student on LMS system	LMS, Email	<p>RPAs can be used to automatically update & statistics student data on LMS online classes such as:</p> <ul style="list-style-type: none"> • Attended class? • Submitted assignments? • Did the test? etc. <p>After that, the system will automatically send notifications to the lecturer about abnormal data (the students took a lot of leave, didn't do the homework, ...) or periodically report information via Email.</p>	<ul style="list-style-type: none"> • Step 1 RPAs automatically log into the LMS system. • Step 2 RPAs automatically access and collect student data in each course on the LMS. • Step 3 RPAs automatically aggregate and compile data (students attending classes, frequency of system access, assignment submission status, test execution status, ...) on the LMS system into an Excel file. • Step 4 RPAs automatically open the Email composing feature and fill in the necessary information fields (To, CC, Subject, Content, attach the summary Excel file). • Step 5 RPAs automatically press the button to send Email to notify lecturers about abnormal or periodic data via Email.
<ul style="list-style-type: none"> → Experimental location: Data collection activities in LMS online classes that the author teaches at Banking Academy of Vietnam, National Economics University, East Asia University of Technology. → Experimental scale: 12 classes (average 50-70 students/class), academic year 2022-2023. → Evaluation of experimental results: Lecturer feel more proactive in detecting weak students in the class in real time. Thereby quickly reminding, warning and motivating students to help them study better. 			
Send surveys and get student feedback	Web-based System, Email	<p>RPAs can be used to automate the process of submitting surveys, collecting and analyzing student feedback related to the teaching activities in each lesson and class.</p> <p>By automating this process, the lecturer can save time and resources, reduce errors, gain a better understanding of the student's experience, and make adjustments to the scenario and teaching content more appropriate.</p>	<ul style="list-style-type: none"> • Step 1 Lecturer designs the survey form on the Web-based System (Google Form, Microsoft Form, etc.). • Step 2 Lecturer completes updating the Excel File containing the survey link, the list of students who needed to take the survey (unify to put the File containing the data to be sent in a certain folder). • Step 3 RPAs read the data fields in the Excel File. • Step 4 RPAs automatically open the composing feature and fill in the corresponding fields in the Excel File in the fields (To, CC, Subject, Content).

		<ul style="list-style-type: none"> • Step 5 RPAs automatically press the button to send survey Email to students. • Step 6 RPAs automatically access the Form system on the Web-based System, export student feedback data into Excel File. • Step 7 RPAs automatically open the Email composing feature and fill in the necessary information fields (To, CC, Subject, Content, attach the summary Excel file). • Step 8 RPAs automatically press the send Email button to notify lecturers of student survey results.
<p>→ Experimental location: Collecting feedback data on students' understanding of each lesson in classes that the author teaches at Banking Academy of Vietnam, National Economics University, East Asia University of Technology.</p> <p>→ Experimental scale: 12 classes (average 50-70 students/class), academic year 2022-2023.</p> <p>→ Evaluation of experimental results: Lecturer feel more proactive in monitoring the understanding and knowledge acquisition of each class in real time. Thereby, the lecturer can adjust the speed and content of the lesson to suit the characteristics of each class. As a result, students can absorb the best knowledge.</p>		

In addition, the study of other useful RPA use cases can be applied for Vietnam higher education such as: automatically grading assignments, automatically entering grades into the training management system, automatically answering students' common questions, automatically collecting students' emotions on social networks,... will help reduce the volume and improve the quality of the lecturer's work. Determining how to apply automation technology for lecturers is very important if you want to minimize the weakness of automation in training activities.

The next challenge to be solved are specific instructions on what tools to use, how to do it, how to deploy,... to perform each automation task planned by the lecturer.

Implications

The challenges facing for Vietnam higher education described above may also be challenges for higher education in other countries. Identifying weaknesses in automation capabilities, discovering the possibility of automating a number of tasks from simple to complex, forming process thinking, step by step towards applying Robotic process automation in solving work is the expectation that the author wants to convey.

References

Phan, T. D., Nguyen. T. T. (2023), Report for Classes on The Digital Competence Wheel, <https://digital-competence.eu/dc/report/?uri=8aa8546eeee0c7a94a9597f630038c5f> (accessed 26 March, 2023).

Chu, V. H., & Pham, X. L. (2022), RPA application to promote automation in training management, International Conference Proceedings: "Digital Transformation in the Context of Industry 4.0", https://www.researchgate.net/publication/368892293_Ung_dung_RPA_nham_thuc_day_tu_dong_hoa_trong_cong_tac_quan_ly_dao_tao (accessed 01 April, 2023).

Munawar, G. (2021), Bot to monitor student activities on E-Learning system based on Robotic Process Automation, https://www.researchgate.net/publication/355356972_Bot_to_Monitor_Student_Activities_on_E_Learning_System_Based_on_Robotic_Process_Automation_RPA (accessed 01 April, 2023).

Bardia Eshghi (2023), Top 16 Use Cases of RPA in Education in 2023, <https://research.aimultiple.com/rpa-education> (accessed 01 April, 2023).

02

Current status of online education and efforts to improve it

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Utilization of Online Platforms for e-learning in Brunei Universities

#E-learning #Online Education #LMS

Jiyeon Moon / Hanyang University



The primary focus of the research articles is to examine the impact of the COVID-19 pandemic on the adoption of e-learning in Brunei Darussalam. The articles provide an analysis of the utilization of Learning Management Systems (LMS) in higher education institutions in Brunei Darussalam, with an emphasis on the advantages of e-learning and the various online platforms used by different institutions.

01

Transformation of Education Systems in Brunei Darussalam

- The utilization of e-learning systems in education has been introduced since the early days of the information age, and with the development of the internet, most e-learning activities now take place in web environments. This trend has been further accelerated by the global COVID-19 pandemic, which has greatly expanded the scope of online learning. Educational institutions worldwide have implemented online learning to mitigate face-to-face contact, and universities in Brunei Darussalam have followed suit.
- Education institutions in Brunei Darussalam have traditionally relied on classroom-based interactions between students and teachers as the core of their learning systems. However, amidst the global upheaval caused by the COVID-19 pandemic, concerns over the spread of the disease grew as Brunei reported its first COVID-19 case on March 9, 2020 (Ministry of Health, Brunei Darussalam, 2020). Although the country did not enforce nationwide lockdown, the government and Ministry of Health implemented social distancing measures, which required educational institutions to adopt alternative methods of education different from the conventional approach (Abdullah et al., 2021). As a result, the utilization of online platforms for e-learning was accelerated in Brunei Darussalam.



02

E-learning Platforms Used in Brunei Darussalam Universities

- E-learning, also known as 'online learning' or 'virtual learning', has become a prominent trend in education institutions worldwide. One of the key tools used in e-learning, particularly in higher education institutions such as universities globally, is the Learning Management System (LMS). LMS is a technological system designed to build online curricula and monitor students' learning processes. Its greatest strength lies in its ability to go beyond the limitations of traditional offline lectures, allowing easy sharing and access to information online. Students can access the platform without being constrained by time or location, and freely exchange feedback, communicate, and interact. Thus, LMS serves as a framework that handles all aspects of the learning process in e-learning (Setiana et al., 2023).

Several universities in Brunei are currently utilizing Learning Management System (LMS) systems for their e-learning initiatives. Among the government institutions, the University of Technology Brunei employs Moodle, while the University of Brunei Darussalam utilizes Canvas. Brunei Polytechnic uses an Official Learning Management System called PBLMS (Politeknik Brunei Official Learning Management System). In the private institutions, Kemuda Institute employs Moodle, and International Graduate Studies College utilizes KIGS LMS.

Universities use online platforms to provide necessary announcements, syllabus, assignment instructions, class materials, and video lectures, among other course-related resources, which are uploaded for students to access at any time. Additionally, students can submit completed assignments at their convenience without having to directly contact their professors. Many scholars highlight the advantages of e-learning, such as its convenience in terms of time and location (1), customization of the learning process according to learners' needs (2), combination of audio, video, and text-based lectures (3), and instant feedback exchange (4).

The screenshot shows the KIGS LMS homepage. At the top, there is a navigation bar with links for 'Site announcements', 'Academic Calendar 2023' (by Kigs.lms - Tuesday, 3 January 2023, 4:21 PM), and a user icon. Below the navigation is a large image of the 'ANNUAL ACADEMIC CALENDAR 2023' for Islamic Civilization and the Modern World (MS-1501). The calendar is a grid of colored boxes representing different academic periods and events. At the bottom of the page is a footer with the KIGS logo and a seal.

Figure 1. The academic calendar 2023 announced on KIGS LMS

The screenshot shows the UBD Canvas portal. On the left, there is a sidebar with icons for 'Login', 'Dashboard', 'Syllabus' (selected), 'Microsoft Teams meetings', 'Calendar', 'Inbox', 'History', and 'Help'. The main content area is titled 'MS-1501 > Syllabus'. It features a 'Course syllabus' section with a link to 'Click here for Latest Announcement!' and a link to 'WATCH THE BRIEFING FOR SEMESTER 2 2022/2023 HERE'. Below this is a 'Jump to today' calendar for April 2023, showing dates from 27 to 30. At the bottom, there is a note about course assignments and a footer with copyright information.

Figure 2. The Course syllabus provided by UBD on Canvas

- As the COVID-19 pandemic comes to an end, the world is gradually returning to the mask-free lifestyle. Face-to-face interactions are becoming more natural, and offline activities are picking up pace. However, the field of e-learning continues to leverage the powerful advantages of internet-based education and maintains various online platforms for educational systems. With the rapid development of e-learning systems after the pandemic, schools need to establish education strategies that achieve appropriate synergy between online and offline systems for the post-pandemic era.



References

Special notes [Special notes]

- <https://pb.edu.bn/>
- <https://www.kemudainstitute.com/>
- <https://ubd.edu.bn/>
- <https://www.utb.edu.bn/>
- <http://www.kolejigs.edu.bn/index>

Abdullah, M. A. A., Almunawar, M. N., & Ali, M. A. (2021). Challenges and opportunities of online learning amidst the COVID-19 pandemic in Brunei Darussalam. *Handbook of Research on Analyzing IT Opportunities for Inclusive Digital Learning*, 1-17.

Aqilah Nawwarah, H. R., Dk Nurul Najah Pg, Abu Bakar, Nur Dina, A. L., Nurul Hikmatull Su'aidah, H. K., Siti Nur Fakhrinah, H. K., & Almunawar, M. N. (2018). E-learning services acceptance in higher educational institutes: A case study in brunei. *Education and Information Technologies*, 23(6)

Dhawan, S. (2020). Online learning: A panacea in the time of COVID-19 crisis. *Journal of educational technology systems*, 49(1), 5-22.

Ministry of Health, Brunei Darussalam (2020a), Media Statement on the Current COVID-19 Infection in Brunei Darussalam, Ministry of Health, Brunei Darussalam, available at: [http://www.moh.gov.bn/Shared%20Documents/2019%20ncov/press%20releases/FINAL%20Press%20Release%20\(eng\)%20-%20First%20Case%20COVID-19%20in%20Brunei%20Darussalam%20\(2\).pdf](http://www.moh.gov.bn/Shared%20Documents/2019%20ncov/press%20releases/FINAL%20Press%20Release%20(eng)%20-%20First%20Case%20COVID-19%20in%20Brunei%20Darussalam%20(2).pdf) (accessed 13 July 2020).

Setiana, D., Besar, N., Susanto, A. K. S., Yie, L. F., Susanto, H., & Subramanian, U. (2023). Digital Education, Learning Management Systems: Shifting Paradigm of Education Technology Within Digital Ecosystems. In *Handbook of Research on Education Institutions, Skills, and Jobs in the Digital Era* (pp. 13-30). IGI Global.

Shahrill, M., Petra, M. I., Naing, L., Yacob, J., Santos, J. H., & Aziz, A. B. A. (2021). New norms and opportunities from the COVID-19 pandemic crisis in a higher education setting: Perspectives from universiti brunei darussalam. *The International Journal of Educational Management*, 35(3), 700-712.

<Figure 1> <http://lms.kolejigs.com/>

<Figure 2> <https://ubd.instructure.com/courses/682>

Cambodia Cyber University Network (CCUN)

#Cambodia Cyber University Network, ITC Training on e-Learning Content Development

Ms. CHOM Sreylam / ITC



Cambodia Cyber University Network (CCUN) is a project that focuses on improving higher education quality by using an online platform, digital teaching, and learning material, continuing education during COVID-19, and also sharing the resource, and infrastructure among Higher Education Institutes (HEIs) include 6 universities that Institute of Technology of Cambodia is the technical support of CCUN project. ITC teams held a training about basic training on e-learning content development that was conducted for 3 days on the flow of developed e-learning content divide into 4 mains roles as Instructional Designer (ID), Content Developer (CD), or Graphic Designer (GD), Studio Engineer (SE) and Subject Matter Expert (SME).

01

Training on e-Learning Content Development under the project Cambodia Cyber University Network (CCUN), Institute of Technology of Cambodia

Institute of Technology of Cambodia (ITC) organized the training on e-Learning content development under the project Cambodia Cyber University Network (CCUN), the 5 HEIs were invited to join the training namely: Royal University of Phnom Penh, Royal University of Agriculture, National University of Battambang, Svay Rieng University and University of Heng Samrin Thbongkhmum.



Figure 1. The training on e-Learning content development

The topic of training is the basic training on e-learning content development that focuses on how to create e-learning with the stage and structure of development of e-learning content. The main purpose of the training is about to allow the trainee to be able to create and develop the e-learning and after this training, each university get the e-learning content file that can upload it for students to learn online as interactive content. In the training session, we separated teams into 3 sessions in parallel time, and it's about ID working with SMEs in order to create a Storyboard by following the structure of e-learning content.

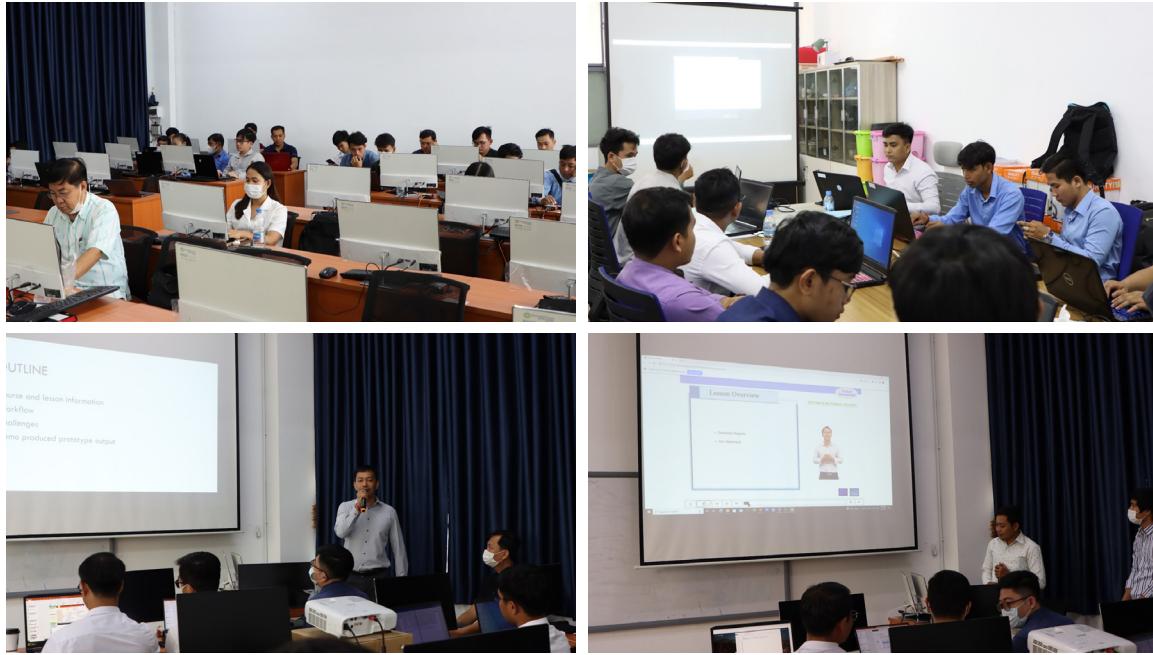


Figure 2. Training sessions

The topic of training is the basic training on e-learning content development that focuses on how to create e-learning with the stage and structure of development of e-learning content. The main purpose of the training is about to allow the trainee to be able to create and develop the e-learning and after this training, each university get the e-learning content file that can upload it for students to learn online as interactive content. In the training session, we separated teams into 3 sessions in parallel time, and it's about ID working with SMEs in order to create a Storyboard by following the structure of e-learning content.

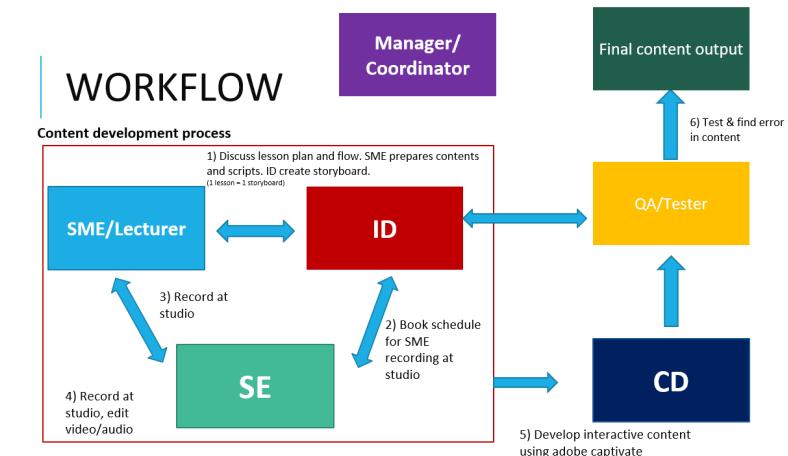


Figure 3. The Workflow of creating e-learning content

Prior to the training, universities of HEIs were invited. The invitation was sent to each university through the network and they need to manage the lectures or staff related to the CCUN project to attempt the training. Below, is the figure of statistical data that we surveyed during the training.



Figure 4-1 Example of survey output

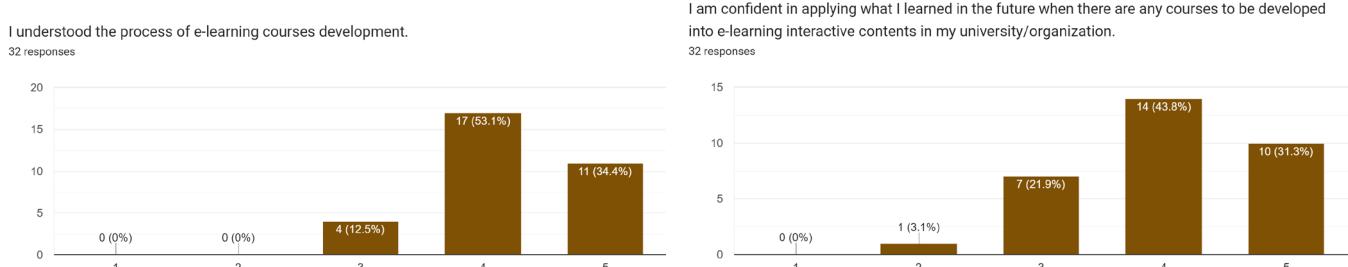


Figure 4-2 Example of survey output

Implications

Basic Training on e-learning content development supported by Higher Education Institute in Cambodia, the output of this training is to allow the trainee to know about the basic stage and structure of creating e-learning content development and understand about the role for creating content. After practicing during the training trainee also can use tools as such Bloom Taxonomy for ID and SME, Adobe Captivate for CD and Adobe Audition, Adobe Premiere for SE. As the results of the training, for each university had created a sample course with the interactive content. Anyway, CCUN project will continue to support the university members to successfully improve their e-learning content.

References

Special notes
<https://www.facebook.com/itcelearningcenter?mibextid=LQQJ4d>

The Use of SYAM-OK in e-Learning and Trends in its Use in the Academic Community of Makassar State University

#universitas_negeri_makassar #syam_ok
#e-learning #lecturer #tren

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System and Application Management Open Knowledge (SYAM-OK) UNM is an online learning platform in the Makassar State University academic community. Implementing SYAM-OK to support online learning has proven successful with the strategies and policies developed by universities. The trend of its use from year to year also continues to increase.

01

The use of SYAM-OK in e-Learning

Makassar State University (UNM) is one of the best tertiary institutions in Eastern Indonesia and one of the higher education institutions focusing on developing online learning platforms. The efforts made by UNM to improve the quality of online learning at tertiary institutions have proven successful. UNM is among the 10 (ten) best tertiary institutions in conducting online learning in 2021 (www.unm.ac.id, accessed in 2023). This shows recognition of UNM's performance and innovation in implementing online learning, where information technology support in learning is a priority for the current chancellor's leadership (Prof Husain Syam, 2023). This achievement is inseparable from UNM's success in developing an integrated online learning platform called the UNM System and Application Management Open Knowledge (SYAM-OK).

SYAM-OK is an integrated online learning platform that the entire UNM academic community can use. This platform provides various services, such as Learning Management System (LMS), Context Management System (CMS), Merdeka Learning, Permata Sakti, Lecturer Workload, Academic Information Systems, and many more. Especially for online learning, the facilities used are CMS used by lecturers and LMS used by students. Lecturers use CMS to include all learning content in courses taught by lecturers in the current semester. Lecturers can include content in the CMS, including presentation files, reference books, learning videos, discussion forums, chat columns, and much more.

To access the SYAM-OK CMS, the lecturer must have a user and password to enter the platform. The lecturers who can access the CMS are permanent, extraordinary, and guest lecturers. Special lecturers and guest lecturers can access the SYAM-OK CMS if the operator has created a separate account, then disinvited by the subject's permanent lecturer. In this case, special lecturers and guest lecturers are given access to manage class activities and cannot create new classes/courses. The login process to the SYAM-OK CMS is as follows:

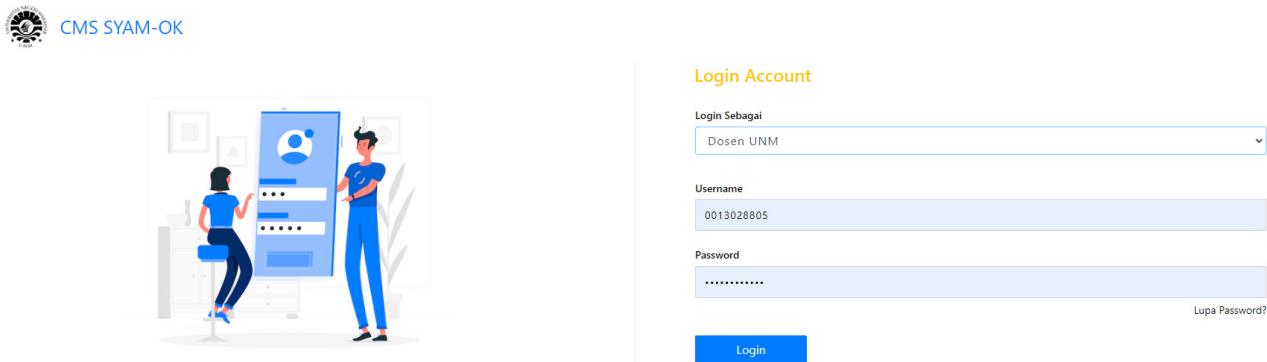


Figure 1-1. Login to the SYAM-OK CMS Platform

After logging in to the SYAM-OK CMS, lecturers must synchronize SIA (Academic Information System) with SYAM-OK so that the course will automatically appear on SYAM-OK. After that, the lecturer can manage course activities by filling in the topics of each meeting to continue filling in the learning content. In addition, lecturers are asked to provide an assessment weight related to the assessment indicators in their teaching subjects. For the importance of the assessment, UNM provides a policy that a minimum of 40% of the weight of the assessment must be allocated to project work or case studies. This shows UNM's support for the Ministry of Education, Culture, Research and Technology's program in implementing case-based and project-based learning in tertiary institutions in Indonesia.

Lecturers can start accessing classes and entering learning content on the SYAM-OK CMS if they have finished creating classes. Data from participants who will take part in class and lecturers who teach courses will be filled in automatically by the system based on existing data in UNM's academic information system (SIA). If a course consists of several classes and the lecturer in question only teaches a few classes in that course, the lecturer can choose or manage which class access can access content created on the SYAM-OK CMS. The following is an example of a course that has been successfully created on the SYAM-OK CMS:

Figure 1-2.
Courses on CMS SYAM-OK

The screenshot shows a CMS interface. At the top, there's a header with the title 'Pengantar Web Design dan UI/UX'. Below it, a slide titled 'PERTEMUAN I PENGANTAR WEB DESIGN UI/UX' is displayed, featuring a smartphone icon and the text 'Disampaikan oleh Dr. Valentino Aris, S.Kom., MM.'. A message at the bottom of the slide says 'PERTEMUAN I oleh Valentino Aris'. Below the slide, a discussion forum is shown with a post from 'Diskusi Materi Pertemuan III MK. Web Design UI/UX' with the status 'Restricted'.

Figure 1-3. The facility on CMS SYAM-OK

Lecturers can also include learning videos embedded in YouTube. Using learning media in the form of videos can help students understand the material provided, especially material that is technical and requires practice.

The screenshot shows a video player with a MySQL command: 'MK: Big Data Pertemuan Ke-7. Untuk mengupdate keterangan dalam kolom "keterangan" dengan perintah UPDATE'. The command is: 'UPDATE <nama_tabel> SET <nama_kolom>=<data>'. Below the command is a table with student data:

nama	kelas	Nilai	ket
Rio Dewanto	Kelas A	90	Lulus
Nina Hendrawan	Kelas A	85	Lulus
Andi Sudirman	Kelas A	100	Lulus
Bayu Setiawan	Kelas A	75	Lulus
Lisa Herna	Kelas A	60	Lulus
Delia Hendrawan	Kelas A	85	Lulus

Note:
Masih terdapat kesalahan pada data, lihat data dengan nama 'Yayuk Basuki'.

Figure 1-4. Video Embed Facility on CMS SYAM-OK

The screenshot shows two attendance-related facilities. The first is 'Pertemuan Ke-7 (Tatap Muka Virtual)' with a note 'Restricted' and a list: '• You belong to 01' and '• You belong to 02'. The second is 'Absensi Pertemuan Ke-7' with a note 'Restricted' and a list: '• You belong to 01' and '• You belong to 02'.

Figure 1-5. Absensi Pada CMS SYAM-OK

The features that lecturers can use to provide online lectures on the SYAM-OK CMS are:

Lecturers can enter or embed presentation files for each meeting. In the picture beside, we use a presentation slide made using the Canva application. Using the Canva application allows lecturers to create more exciting and interactive presentation slides to motivate students to attend lectures. In addition, lecturers can include other lecture references in digital formats such as *.doc, *.pdf, and other formats.

Lecturers can include forums or chat facilities that can be used as a means for students to hold discussions related to lectures. In addition, lecturers can also provide suggestions for students to submit assignments directly through the LMS. The advantage of using this facility is that lecturers can arrange assignment collection times.

Lecturers can conduct virtual face-to-face lectures using the Google meet facility. The Google Meet facility is available in full access, so there is no longer a time limit for completing lectures. If the lecturer wants to use another virtual face-to-face application, enter the meeting link on the SYAM-OK CMS.

Online attendance is also available on the SYAM-OK CMS. Lecturers can use this facility to obtain student attendance data at the end of lectures. This facility allows lecturers to get attendance data more efficiently and validly.

This facility allows lecturers to manage students' attendance time and arrange which classes in the course can fill in attendance. With these features, the resulting attendance data can be much more accurate than using attendance manually.

Implications

The availability of various facilities in the SYAM-OK CMS application can make it easy for lecturers and students to conduct lectures online. Lecturers can share more learning content through the SYAM-OK CMS. Online learning on the SYAM-OK CMS can also be carried out synchronously and asynchronously to produce better learning outputs.

02

Trends in Using SYAM-OK in the Academic Community of Makassar State University

Online learning is a learning system without face-to-face meetings between lecturers and lecture participants but is carried out online using the internet network. Online learning is becoming a trend in Indonesia following the World Health Organization (WHO) declaring the COVID-19 virus a world pandemic in 2020. The spread of the virus is very fast and endangers the Indonesian people, causing the President of Indonesia, Joko Widodo, to issue a policy of Large-Scale Social Restrictions (PSBB).

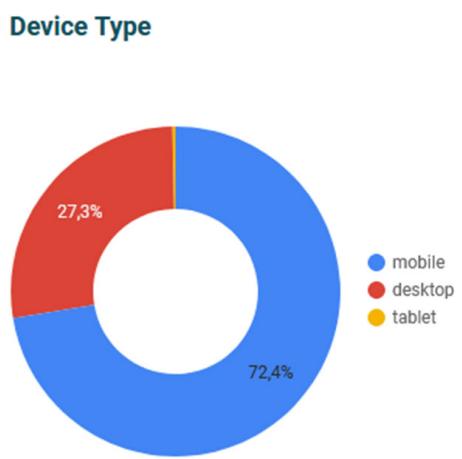
The PSBB impacts activities in public spaces, including offices, schools, and universities. In tertiary institutions, this strategy requires all tertiary institutions to replace the face-to-face learning process with an online learning process. Responding to this policy, the Ministry of Education and Culture emphasized learning policies during a pandemic by issuing a study-from-home policy. This policy requires using the internet network through smartphone intermediaries, gadgets, and applications to assist virtual face-to-face learning activities. This condition has also become one of the pioneers in developing a learning management system (LMS) which has become a platform for universities to develop e-learning. With the LMS, lecturers can make the packaging of online learning as attractive as possible for students so that they remain interested in online lectures, changing their perceptions to prefer online lectures.

System and Application Management Open Knowledge (SYAM-OK) is a Learning Management System within Makassar State University. Since it was launched in 2021 by the Chancellor of UNM, Prof. Dr. Ir. H. Husain Syam, M. TP., IPU., SYAM-OK began implementing synchronous and asynchronous online lectures. UNM continues to develop policies to maximize the use of SYAM-OK for online learning through the command of UNM's Deputy Chancellor for Academic Affairs, Prof. Dr. Hasnawi Haris, M. Hum. Several policies in the implementation of SYAM-OK have been made and implemented, including the use of SYAM-OK in learning, which requires lecturers to register their courses on the SYAM-OK platform, the use of SYAM-OK in conducting training in the SYAM-OK environment, the integration of SYAM-OK with other platforms internal to UNM and external to UNM (we will discuss this in the next edition of the ACU Project) and many more. Several of these policies have been implemented successfully in recent years to support using SYAM-OK for online learning.

ELECTINDO STUDENTS BEHAVIOUR DASHBOARD				SOURCE:SYAM-OK - REALTIME
New users	Sessions	Views	Sessions per user	
54.461	826.023	5.861.095	9,6	
↑ 6.1%	↑ 22.6%	↑ 24.7%	↑ 8.1%	

Figure 2-1. SYAM-OK User Data Dashboard

Figure 1 shows that as of April 2023, the number of SYAM-OK platform users is 54,461. The number of SYAM-OK users continues to increase, compared to users in March 2023, by 6.1%. The user was recorded as having conducted 826,023 sessions, and each was recorded as having carried out 9.6 sessions. This session shows the interaction between the user and the web page for a certain period, generally counting interactions until the user is inactive for 30 minutes. This indicates that each SYAM-OK user uses the platform for at least 30 minutes in 1 session (288 minutes per user). Therefore, the use of SYAM-OK in the UNM environment is very high in supporting the implementation of online learning.

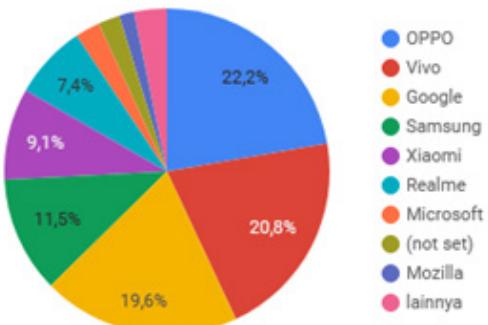


Screen resolution	Sessions
1. 360x800	123.196
2. 1366x768	110.349
3. 360x760	63.291
4. 385x854	49.997
5. 1280x720	45.254
6. 393x873	42.648
7. 360x780	41.766
8. 424x942	37.871

Figure 2-2. Device Type Data Dashboard for SYAM-OK Access

One of the critical factors in implementing information technology and systems is the ease of access using any device. Figure 2 shows the types of devices that can access the SYAM-OK platform. Data indicates that SYAM-OK can be accessed from all types of devices, such as mobile, desktop, and tablet devices. Most SYAM-OK users use mobile devices to access SYAM-OK, a percentage of 72.4%, 27.3% use desktop devices to access SYAM-OK, and 0.3% access SYAM-OK using tablet devices. Apart from that, SYAM-OK is also proven to be accessible with the latest devices and devices that are a bit behind in technology, especially screen resolution. This screen resolution indirectly shows the quality of the device used; the newer and more sophisticated the device, the greater the screen resolution. The data shows that most users use the device screen resolution to access SYAM-OK is 360×800. Resolution quality like this is usually found on lower-middle-class devices, so SYAM-OK is already user-friendly regarding the type of device used to access it.

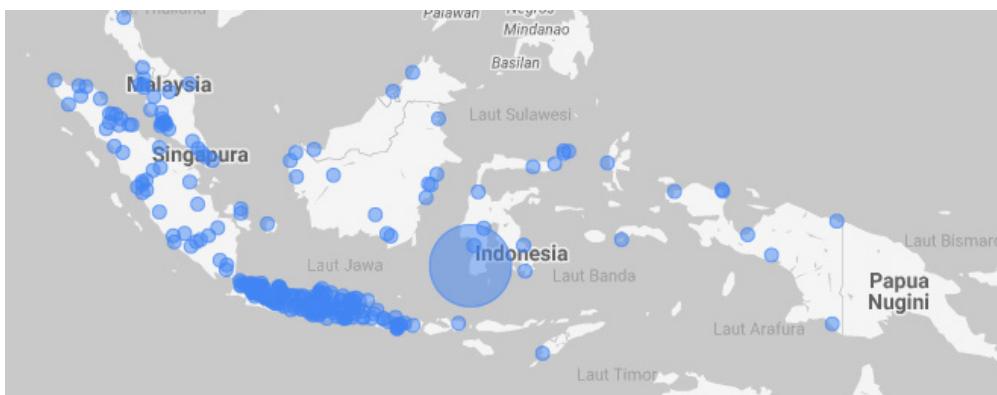
Device Model



Operating system	Sessions
1. Android	583.576
2. Windows	199.732
3. Linux	16.991
4. Macintosh	7.886
5. iOS	13.814
6. Chrome OS	997

Figure 2-3. Operating System Type Data Dashboard for SYAM-OK Access

Another critical factor in implementing information technology and systems is compatibility with the operating system. The data in Figure 3 shows that SYAM-OK is compatible with almost all types of operating systems commonly used by users in Indonesia. The data shows that most SYAM-OK users use the Android operating system. This indicates that the majority of users use smartphone devices to access SYAM-OK. This makes it easy for the UNM academic community because almost everyone has smartphones, so all users have equal opportunities to access the SYAM-OK platform. Even though most use smartphone devices, users can still access it using desktop devices such as personal computers (PCs), laptops, etc. The data also shows high use of desktop-based OS such as Windows, Linux, and Macintosh.



User Location Data Dashboard When Accessing SYAM-OK

SYAM-OK also makes it easy to use and accessible anywhere and anytime. The data in Figure 4 shows that most users who access SYAM-OK are located in South Sulawesi Province, especially Makassar. Apart from Sulawesi Island, most users also access SYAM-OK on Java and Sumatra Islands. However, overall, users can access SYAM-OK on almost all islands in Indonesia. The data also shows that besides being accessible within the country, the SYAM-OK platform can be accessed abroad. Apart from Indonesia, the SYAM-OK platform is also recorded as accessible in Malaysia, Australia, the United States, countries in Europe (such as Germany, Spain, etc.), and countries in Asia (such as China, South Korea, etc.). This shows that in terms of accessibility, the SYAM-OK platform can be accessed anywhere in the world.

Implications

The trend of increasing the number of SYAM-OK users shows the high enthusiasm of the Makassar State University academic community for online learning. The data shows an increase in the number of users followed by a higher level of user interaction sessions with the SYAM-OK platform. Ease of access, such as being accessible from all types of devices, compatibility with various media, and accessibility where users can use SYAM-OK from all over the world, are factors that influence the high interest of users to use SYAM-OK.

References

- Hartoto. Diakses 2023. <https://s.id/esbed>
- SYAM-OK website. <https://syam-ok.unm.ac.id/>
- SYAM-OK Manual Book Link: <https://mbkm.unm.ac.id/wp-content/uploads/2021/08/PANDUAN-SYAM-OK-untuk-MAHASISWA-ebookFINAL-JUNI2021.pdf>
- SYAM-OK Google Analytics. <https://analytics.google.com/analytics/web/#/p243661200/reports/intelligenthome>

Post Pandemic ViLearning Unesa User Trend

Ms. Prima Vidya Asteria / UNESA



In the post pandemic time, courses using the ViLearning Unesa platform experience a sharp decline trend. It has not yet fulfilled the expectations and needs of teachers and students of Universitas Negeri Surabaya. Vilearning Unesa platform must improve the reliability of online meeting features so that it can carry out online learning anytime, anywhere, and can organize quality learning.

01

THE POST PANDEMIC DEVELOPMENT OF UNESA VILEARNING PLATFORM

- The driving motor for the development of online learning in the education system in Indonesia is the Ministry of Education and Culture of the Republic of Indonesia through the Indonesian Open and Integrated Online Lecture Program (KDITT) on a national scale. The objectives of the program are 1) to increase the distribution of educational services, 2) to increase the affordability of educational services, 3) to improve the quality and relevance of educational services, 4) to increase equity in obtaining quality education services, and 5) to increase security in obtaining quality education services (Ministry of Education and Culture, 2014). In 2016, the KDITT program changed to the Indonesian Online Learning System (SPADA) which is managed by the Directorate General of Learning and Student Affairs. The main goal of the SPADA system is the equal distribution of quality online learning. Through SPADA, every student from various tertiary institutions can take courses from other tertiary institutions according to their field of expertise. Furthermore, the results of online learning are equated as study program subjects by the tertiary institution where the student is registered as a student. This is following SPADA's goals, where students can take lectures from campuses that are considered to have better quality so that students gain knowledge, skills, and broader insights.

The presence of SPADA Indonesia can encourage various higher education institutions to build and manage independent online learning platforms that are connected to the SPADA system. Universitas Negeri Surabaya (Unesa) as one of the teacher-based tertiary institutions in Indonesia also launched the Universitas Negeri Surabaya Virtual Learning platform (ViLearning Unesa). ViLearning Unesa is a system specifically designed as a means or facility that supports the teaching and learning process which is carried out without having to meet face-to-face between lecturers and students so that ViLearning can provide better and more effective information services for the teaching and learning process.

Utilization of ViLearning Unesa features is expected to be able to support the implementation of a consistent and quality learning process so that it can increase students' absorption of targeted competency achievements. In addition, learning tools stored in ViLearning can be reviewed anytime and anywhere and can be well structured and scheduled.



- ViLearning Unesa System is a well-integrated system allows students to obtain all the required lecture information and it can carry out the learning system properly via internet network connection. The output obtained from this learning system is also not inferior to conventional lectures. There are many advantages offered by ViLearning Unesa system, including flexible class schedules, learning rhythms according to student abilities, the material can be understood properly, more energy efficiency, cost and time efficient. Some of the facilities provided by Vilarning at Universitas Negeri Surabaya include management of students or students, management of learning materials, management of the learning process including management of learning evaluations, and management of communication between students and facilitators. This facility allows teaching and learning activities to be managed without direct face-to-face meetings between the parties involved.

The flexibility and reliability of the ViLearning Unesa platform have been tested during the co-19 pandemic. At that time, the use of ViLearning Unesa platform reached its peak. Almost all theoretical learning-based courses use online learning models. Implementation of lectures, presence attendance, assistance, guidance, and assignments utilize the features of the ViLearning Unesa platform. This was also encouraged by the Circular of the Minister of Education and Culture concerning Online Learning and Working from Home to Prevent the Spread of Covid-19 since March 17, 2020 (kemdikbud.go.id., 2020). Some of the policies implemented include lectures held without having to face to face, but using online facilities. As for face-to-face academic activities, such as thesis guidance, research guidance, guest lectures, field lectures, proposal meetings, final hearings, student exchanges, or similar activities, their implementation has been postponed or also carried out online. The practice-based courses are carried out with two options, namely the courses are carried out online or carried out with strict co-19 prevention procedures.

Before the Covid-19 pandemic period, the use of ViLearning Unesa was still limited. The courses contained in ViLearning Unesa are courses that come from lecturers who carry out online learning research, lecturers who are members of the Unesa e-learning team, as well as lecturers assigned to study programs to teach online-based courses. Lecturers' interest in utilizing online learning through ViLearning Unesa is still low. This is supported by the condition of the ViLearning platform which is still in the development stage so several facilities and features supporting learning activities are still incomplete or not optimal. To foster interest in online learning, since 2017, Unesa has required each lecturer to develop one online course (Yulianto, 2017; Asteria, 2017; Asteria, dkk, 2018; 2019, 2020). Every learning tool, starting from lesson plans, learning meeting plans, teaching materials, attendance, and assignments, to midterm evaluations and end-semester evaluations use the platform. This is marked by the increasing number of courses that use the Unesa ViLearning platform.

In 2020, during pandemic situation, there has been a significant increase in the use of ViLearning Unesa. From the 74 graduate-level study programs at Universitas Negeri Surabaya that implemented a curriculum shift from a curriculum based on the Indonesian National Qualifications Framework (KKNI) to a curriculum based on the Merdeka Learning Campus Merdeka (MBKM) implemented nearly 5,400 courses. Of these, around 3,268 courses were recorded as using ViLearning Unesa, or 60.52% of the total number of Unesa's environmental study program subjects applying the online learning model. This is supported by the transition from offline to online learning models due to the outbreak of the Covid-19 outbreak in Indonesia. The 2020 pandemic occurred suddenly, forcing every tertiary institution to organize distance learning based on an internet network connection. The surge in online demand has caused the performance of ViLearning Unesa platform to face obstacles in organizing quality learning. Starting from platform instability when the number of users is large at the same time, network connections are cut off when using the virtual sync feature, and the platform is halting and even hangs when learning activities take place. This has an impact on less-than-optimal learning conditions.

The peak use of ViLearning Unesa platform occurred in 2021 when Indonesia experienced the second and third waves of the Covid-19 outbreak. Nearly 84.56% of all courses use the ViLearning Unesa platform. However, reflecting on the experience in 2020, there are restrictions on using the network-based face-to-face meeting feature (virtual sync) on the Unesa ViLearning platform to avoid problems occurring during learning. Specifically for online lectures, lecturers and students use applications from third parties such as Zoom, Google Meet, and others applications. Meanwhile, ViLearning Unesa is only used to provide document-based lectures and chat only. Learning tools such as lesson plans, learning materials, teaching videos, assignments, discussions via messages can still use the features of ViLearning Unesa.

In 2022, courses using the ViLearning Unesa platform experience a sharp decline. Only 43.80% of the total number of courses in the Unesa study program use ViLearning Unesa. This decrease was due to the end of the Covid-19 pandemic so that lectures were held offline. Only a few courses with certain conditions carry out online lectures, for example the Indonesian Language course which is a compulsory subject and is attended by a number of participants that exceeds the capacity of the lecture hall. This was also driven by an increase in the number of new student admissions without being matched by an adequate number of lecturers or sufficient classroom capacity. In addition, the reliability of the virtual meeting feature on ViLearning Unesa platform still needs to be improved so that it is truly able to meet the teaching and learning needs of lecturers and students. The following illustrates the trend in the number of courses using the Unesa ViLearning platform in the last three years.

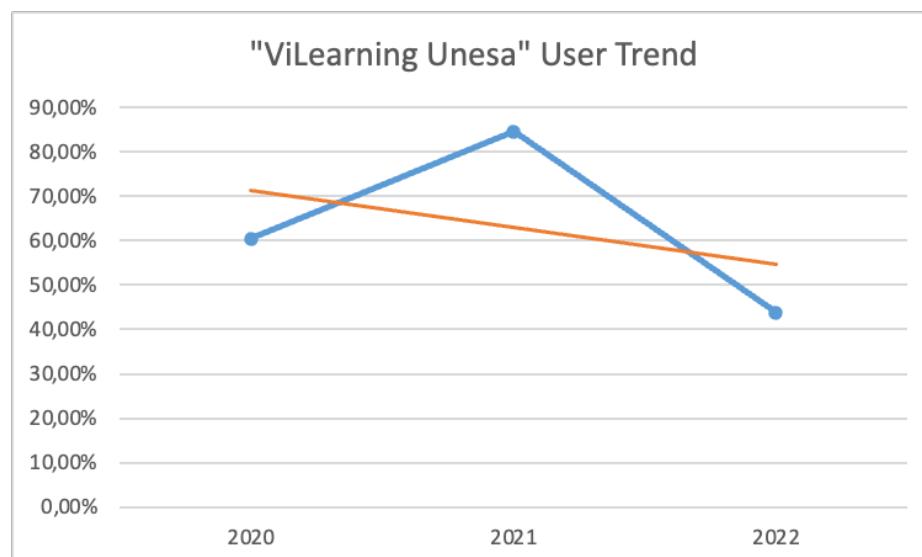


Figure 1.
Image of ViLearning Unesa
User Trend

- Based on the description above, it can be concluded that 1) ViLearning Unesa Platform must be able to meet the teaching and learning needs of Unesa lecturers and students to increase learning motivation and create an interactive and communicative learning atmosphere; 2) The reliability of the online meeting feature (virtual sync) must be improved to ensure real-time learning activities. Through these improvements, ViLearning Unesa is expected to be able to become a bridge so that Universitas Negeri Surabaya can carry out online learning anytime, anywhere, and can organize quality learning. This aims to ensure the quality of graduates that is comparable to the needs of graduate users and the wider community, so that all graduates of Universitas Negeri Surabaya will have good quality and be ready to face future challenges.

Implications

The reliability of the online meeting feature (virtual sync) must be improved to ensure real-time learning activities. Through these improvements, ViLearning Unesa is expected to be able to become a bridge so that Universitas Negeri Surabaya can carry out online learning anytime, anywhere, and can organize quality learning.

References

- Yulianto, Bambang. (2017). PENGEMBANGAN MATA KULIAH DARING BLENDED STATISTIK PENDIDIKAN. LPPM research is not published. Surabaya: Universitas Negeri Surabaya.
- Asteria, Prima Vidya. (2017). PENGEMBANGAN MATA KULIAH DARING BLENDED TEORI BELAJAR BAHASA. LPPM research is not published. Surabaya: Universitas Negeri Surabaya.
- Asteria, P. V. & Yulianto, B. (2018). PERANCANGAN MATA KULIAH BLENDED METODOLOGI PENELITIAN BAHASA. LPPM research is not published. Surabaya: Universitas Negeri Surabaya.
- Asteria, Prima Vidya. (2018). PERANCANGAN MATA KULIAH BLENDED BAHASA INDONESIA BAGI PENUTUR ASING. LPPM research is not published. Surabaya: Universitas Negeri Surabaya.
- Asteria, P. V. & Yohanes, B. (2018). PENGEMBANGAN EVALUASI VI-LEARN MATA KULIAH METODOLOGI PENELITIAN PENDIDIKAN BERBASIS LITERASI INFORMASI. LPPM research is not published. Surabaya: Universitas Negeri Surabaya.
- Asteria, P. V., Sodiq, S., Turistiani, T. D. (2020). The Effectiveness of Online Flipped Learning Based on Problem-Based Learning Model in the Language Editing Course at Indonesian Language and Literature Education Program. International Joint Conference on Arts and Humanities (IJCAH 2020), 967-974.
- Purwono, P. Y. & Asteria, P. V. (2021). Pembelajaran BIPA Dengan Aplikasi Awan Asa Berbasis Pengenalan Lintas Budaya. Fon: Jurnal Pendidikan Bahasa dan Sastra Indonesia 17 (1), 97-107.

e-learning in South Korea before and after the pandemic

Kang Yee Sun / Korea University



South Korea implemented e-learning before the pandemic to improve grades. However, online learning during COVID-19 proved challenging, particularly for younger students who struggled to concentrate without parental support. Despite efforts to improve e-learning platforms, there were widening achievement gaps among students, highlighting decreased concentration and academic performance at home.

01

► Background of E-learning in South Korea

South Korea, a nation with high technological advancement, has adopted e-learning long before the pandemic. With the 'algorithm system' in great advance, it helped students to learn efficiently even after school. Thus, 'smart home-school material' market has increased in popularity. Aim of e-learning before the pandemic was to analyze every students' tendencies and learning behaviors and teach them accordingly which would improve their grades. With various developed e-learning platforms, student would be able to increase their academic ability as well as catching up on areas that they were not sure in school.

► Students struggles with unprecedented online learning

Although e-learning was adopted in Korea from a long time ago with the largest private education market, online public education with COVID-19 struggled numerous students. The younger the students, the harder to concentrate. A lot of parents had to be next to their child during classes. One parent stated that, "It is impossible for my child to take online classes without me around. It would be better if the semester did not begin at all." A lot of parents were overly stressed due to the amount of help the children needed. This was not the only concern of the parents, the biggest concern was that there is lack of communication between the educators and students.



► Achievement gaps widen as remote learning continues

Even one year after the COVID-19 outbreak, e-learning has continued. A lot of report apparently showed the achievement gaps between the middle school students in 2020 than in previous years. According to a study by Seoul Education Research and Information Institute involving 382 middle schools in Seoul, the proportion of students with grades between B and D dropped greatly. With key subjects' grades dropping greatly, the Ministry of Education is putting a lot of effort into enhancing the Korea Education and Research Information Service's e-Learning site. Unfortunately, no matter how much investments are going into the e-learning system, the student's concentration at home dropped greatly.

► New Implementations to e-Learning during and after the pandemic

With disasters and emergencies over the last three years, South Korea has learned its lesson. South Korea has suffered from education disruptions with increasing learning inequality. Thus, the government has applied several strategies to protect learning from students. The system of e-learning was great but a lot of students protested that it was hard for them to dedicate to their studies due to other factors.



References

Hyun-Ju, Ock. "S. Korea Struggles With Unprecedented Online Learning - the Korea Herald." The Korea Herald, 23 Apr. 2020, www.koreaherald.com/view.php?ud=20200422000883.
---. "S. Korea Struggles With Unprecedented Online Learning - the Korea Herald." The Korea Herald, 23 Apr. 2020, www.koreaherald.com/view.php?ud=20200422000883.

Jun-Tae, Ko. "[News Focus] Achievement Gaps Widen as Remote Learning Continues Amid COVID-19 - the Korea Herald." The Korea Herald, 21 Apr. 2021, www.koreaherald.com/view.php?ud=20210421000859.

www.etnews.com. "South Korean Government to Introduce AI-Based Personalized Learning Service to Public Education." ETNEWS :: Korea IT News, 5 Sept. 2019, english.etnews.com/20190906200002.

Yarrow, Noah, et al. "Online Learning in Korea: Moving Ahead and Falling Behind During COVID." World Bank Blogs, 15 Apr. 2023, blogs.worldbank.org/education/online-learning-korea-moving-ahead-and-falling-behind-during-covid.

e-learning and teaching implementation during the outbreak of COVID-19

Dr. Khamkeo HANSANA / Deputy Director General



Since the outbreak of the COVID-19 has changed a lot of things in Lao Education especially in the field of e-learning. Not only Four universities called National University of Laos, University of Savanneket, University of Champasack and University of Sophanouvong but also teachers in school fields were trained to use the online teaching tools. Furthermore, considering the importance of e-learning, many projects related to e-learning, such as SITOS and UNICEF Laos(2021) are now being implemented.

01

► Background of e-learning in Lao PDR

Learning through the digital platform has been considered to be the most important part of learning in every single country because it not only provides interesting learning topics that meet students' learning types but also to access the literacy skills like information, media and technology skills simultaneously in the digital age. Since the Ministry of Education and Sports has started to implement the National Education System Reform Strategy, e-learning itself is recognized at an early stage. Later on, since the outbreak of COVID-19 in 2020, the concept of the e-learning has played an important part in the education system of Lao PDR like other countries that have been integrating in their education systems.

► e-learning and teaching implementation during the COVID-19 outbreak.

According to the Ministry of Education and Sports (2021), due to the COVID-19 outbreak, the government of Lao PDR, as well as the Ministry of Education and Sports has made and issued the notice on e-learning to instruct and manage the learning and teaching implementation from the basic education to the higher education levels. For example, Teachers at National Universities like national universities of Laos, University of Savanneket, University of Champasack and University of Sophanouvong, teachers of secondary school as well as teachers of primary school were trained the online teaching tools which are called the Google Classroom, zoom and Moodle to make use in their teaching. The Google Classroom is one of the teaching and learning tools that have been applied widely at National University of Laos because it is free and the amount of the time is not limited. By using this teaching and learning tool productively, Teachers were trained how to use the program of the Google Classroom. For instance, the program of teaching, how to download their teaching materials, how to share the teaching materials for students on screen, how to assign homework, how to make examination papers and grade students.

► Challenge of e-learning implementation

It can be seen that there were some difficulties that teachers experienced while they were implementing of the e-learning. For example, some teachers who are not good at Information Technology could not deliver their teaching effectively. Some of whom did not have the internet access at home so they needed to go the use in the internet at workplace to deliver their teaching. In addition, students also faced difficulties especially, the ones who live in the provinces could not take part in their learning properly.



► Lesson learned

Through the implementation of e-learning, it was found that the e-learning implementation was not effective enough. However, it helped the majority of students to continue their studies and finished their studies definitely. At the same time, teachers could deliver their teaching programs based on the timeframe.

► e-learning project

Currently, there is a project with the aim of improving the ICT-System for e-learning, as well as the school management information system of the Lao PDR. There are 6 areas of the project. These include the e-learning management system called SITOS, ICT e-learning courses, an authoring tool for own e-learning content creation, the school management system SOKRATES, physical hardware structure and Capacity Building and Human Resource Development (EEE Austria, n.d.).

UNICEF Laos (2021) claimed that because the importance of e-learning was emphasized, the Ministry of Education and Sports (MoES) on 05 October 2021 officially launched the country national digital teaching and learning platform, called the Khang Panya Lao on 05 October 2021. It is the first national digital platform which has been developed with the support of UNICEF and in collaboration with the European Union (EU) and the Global Partnership for Education (GPE). The aim of developing this digital platform is to facilitate distance learning for students and teachers to ensure the continuity of learning during the COVID-19 pandemic and other emergencies. In addition, it is designed as a supplementary teaching resource for use in face-to-face classes.

In addition, for example, in 2022 The National University of Laos (NUoL) signed the Memorandum of Understanding (MOU) on e-learning with a South Korean university. Both agreed to jointly develop e-learning content. This became the important step for implementing e-learning in higher education (Kang, 2020).

References

EEE Austria. (n.d.). Retrieved from <https://eee-austria.com/project/improvement-of-e-learning-system-in-laos/>

Kang, T. (2020). National University of Laos to Develop E-learning Content. The Laotian Times. Retrieved from <https://laotiantimes.com/2020/01/02/national-university-of-laos-to-develop-e-learning-content/>

Ministry of Education and Sports. (2021). Notice on continuing COVID-19 Prevention, Control and Solution. No. 1096, 16 November 2021.

Ministry of Education and Sports. (2021). Notice on Model, and Method re-learning-teaching implementation in the Academic year 2021- 2022. No. 1703, 09 June 2021.

UNICEF Laos. (2021). Retrieved from <https://www.unicef.org/laos/press-releases/ministry-education-and-sports-officially-launches-national-digital-teaching-and>

03

Higher education proposals in ASEAN countries

Click each Index to go to the page that you want to read.

- 
- A faint background network graph shows the connections between ASEAN countries, with nodes representing countries and lines representing their relationships. The countries labeled are Indonesia, Myanmar, Philippines, Thailand, and Vietnam. Below the graph, five numbered circles (01 to 05) are aligned horizontally, corresponding to the numbered sections in the main content.
- 01
 - 02
 - 03
 - 04
 - 05

Gamification for Blended Learning in Higher Education

#gamification #blended_learning
#gamification_in_higher_education

Sella Mawarni / Universitas Negeri Makassar
Hartoto / Universitas Negeri Makassar



Gamification has the definition of using game-based mechanics, aesthetics, and game thinking to engage people, motivate action, promote learning, and solve problems. Gamification in learning means applying ways of thinking and game elements into the learning process which aims to increase motivation and student engagement. Gamification makes the learning process more fun and challenging so students can learn better.

01

Gamification of Learning to Increase Learning Motivation in Higher Education

An interesting and enjoyable learning process is certainly a dream for all educators and students. Gamification offers a solution to help improve the learning process so that learning feels more enjoyable as if you were playing a game. In simple terms, Gamification is a learning method that applies the working principle of a game in the learning process to grow the target's interest and curiosity. Gamification methods are often used to foster learning motivation and change student behavior. At the beginning of its development, gamification was widely applied to aspects of business and marketing, but now gamification has been widely applied to aspects of learning.

Gamification in learning can increase students' learning motivation. Kapp (2012) defines gamification as using game-based mechanics, aesthetics, and game thinking to engage people, motivate action, promote learning, and solve problems. The concept of learning that applies the gamification method can be interpreted as having patterns of thinking, approaches, and game elements in the learning process. Gamification in learning can be applied by integrating game components such as: challenges/tasks, points, levels, badges, and rankings of users. Meanwhile, game thinking that can be adapted into the learning process can be in the form of freeform to fail, rapid feedback, collaborative processes, and competition.

The application of gamification in learning is different from simply using educational games in learning. Gamification in learning is also different from game-based learning. This difference in concept is still rarely understood by educators. Gamification is an easy thing, maybe even often applied without realizing it.

For example, when a lecturer gives assignments to students then the lecturer gives additional rules that students who submit assignments for the first time will get prizes in the form of additional points or grade scores. It can be said that the lecturer has implemented gamification because the lecturer has implemented one of the game components namely challenges and points. Game based learning can be defined as a learning process that uses games or playing games to improve critical thinking and problem solving. Game -based learning can be completed with digital or non-digital games and can include simulations that allow students to experience learning directly (<https://tophat.com/>). In short, game-based learning aims to make students able to deepen a material using games or games while gamification in learning aims to increase students' motivation to continue learning and involve them in a competitive learning environment.

Gamification in learning can be applied in both online and offline learning contexts. Gamification can also be applied with the help of technology or without technology. Some software or tools (web based) to help implement gamification in online learning: Wordwall, Socrative, Kahoot! FlipQuiz, Duolingo, Ribbon Hero, Quizziz, Padlet, Mentimeter and Goalbook. Gamification can also be applied in the context of a Learning Management System (LMS) such as SYAM-OK Makassar State University. Several LMS features that enable the application of learning gamification, namely: user picture avatar, visibility of students' progress, display of quiz results, levels, feedback, badges, and leaderboard.

Implications

Gamification in learning can be applied in both online and offline learning contexts. Gamification can also be applied with the help of technology tools or without technology tools. Technological tools in gamification play a role as a support for educators in applying elements and game thinking so educators focus more on material content.

02

How to Apply Gamification in Learning into Blended Learning?

Blended learning is a combination of online and face-to-face learning concepts. Blended learning has synonyms with hybrid learning. Hybrid learning is a learning experience designed to combine online learning and face-to-face learning, so according to the Canadian Digital Learning Research Association (CDLRA) the two terms have the same meaning and can be used interchangeably (Johnson, 2021). Easy steps that educators can take include: (1) analyzing the characteristics of students; (2) determining learning objectives; (3) selecting materials, methods, and media or tools to be used; (4) adding game elements and mechanics; (5) evaluate and revise. The analysis phase of student characteristics is carried out as a basis for needs analysis in developing appropriate learning processes. This stage includes analyzing students' basic abilities in using technology, learning styles, and general characteristics of students. Determining learning objectives is related to the formulation of learning objectives which will be applied to the gamification method. The clearer the objectives are achieved, the easier it will be to determine the appropriate material, media, and tools. Next, the stage of selecting materials, methods, and gamification media or tools. The tools or media used need to be supported by the application of game elements and mechanisms to increase student motivation.

In the final stage an evaluation is needed to assess whether the application of gamification in learning can support the achievement of learning objectives effectively and efficiently or vice versa.

Gamification can be applied to increase students' learning motivation during Blended learning, due to the addition of game elements in the form of challenges/tasks, points, levels, badges, and ranking of users, as well as ways of thinking games that can be adapted into the learning process in the form of freeform to fail, rapid feedback, collaborative processes, and competition can make students more enthusiastic in learning. The focus when applying the gamification method is not on what tools to use but on what activities need to be done to make learning more fun and interesting for students to always listen to. In Blended learning, gamification can be applied to synchronous online learning scenarios, to asynchronous online learning, and to face-to-face learning. Some examples of cases of implementing learning gamification at Makassar State University, including:

- The application of the debate method (2 groups) as a challenge that must be completed by students to get a prize as the winner. In determining the champion, students are directed to carry out collaborative processes and competition in groups. In order to win the debate, each group competes to convince other students with logical and systematic opinions. The debate method is used as a form of challenges that must be completed and as a form of implementing collaborative processes and competition, a class poll is conducted to determine the debate champion.
- Brainstorming uses Padlet media as a challenge for each student to write down their best opinion, then provide rapid feedback for each opinion. Using Padlet makes students do collaborative processes. Each student can also give comments, likes, and ratings to each other's posts.
- The use of the Quizziz application to create lecture quizzes is much more interesting. Quizziz is accessed together as part of the end of lectures to check student knowledge retention. The Quizziz feature allows students to work on evaluations like they are playing games, due to rapid feedback, points, badges, and ranking of users so students are competing to be ranked first.
- Gamification in LMS SYAMOK in the form of Levels. Student activities at SYAMOK are always monitored in the form of a Progress Bar and Level (Badge) which is then processed into a competition for the TOP 5 Completed Students. The accumulated points then turn into star levels and will automatically be sorted according to ranking.
- Gamification in face-to-face learning is carried out in the form of giving appreciation or rewards for winners of lecture assignment challenges.

Gamification focuses on applying game elements and ways of thinking, so that when it is contextualized into learning, the main goal is to apply game elements and components to support the achievement of learning objectives. Gamification of learning does not always have to use technological tools because game ways of thinking such as freeform to fail, rapid feedback, collaborative processes, and competition can also be facilitated directly by teachers to students. The use of the gamification method must have at least 3 main characteristics, namely increasing learner motivation levels, improving knowledge retention, and better learner engagement through social mechanisms like badges, points, or leaderboards (Buljan, 2021). The task objectives, at least can be used as a benchmark for how far the gamification applied in the learning process is said to be successful or not.

Implications

Easy steps that educators can take when they want to implement learning gamification, include: (1) analyzing the characteristics of students; (2) determining learning objectives; (3) selecting materials, methods, and media or tools to be used; (4) adding game elements and mechanics; (5) evaluate and revise. Furthermore, at the end of learning there are three criteria for success of gamification which include: increasing learner motivation levels, improving knowledge retention, and better learner engagement through social mechanisms.

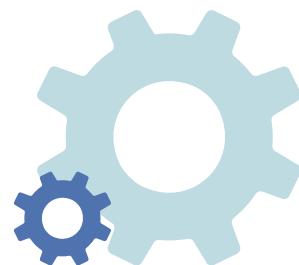
References

- Buljan, Mario. (2021, November 15). Gamification For Learning: Strategies and Examples. Retrieved from <https://elearningindustry.com/gamification-for-learning-strategies-and-examples>.
- Johnson, Nicole. (2021). Evolving definitions in digital learning: A national framework for categorizing commonly used terms. Canadian Digital Learning Research (CDLRA) / Association canadienne de recherche sur la formation en ligne (ACRFL).
- Kapp, K. M. (2012). The gamification of learning and instruction: game-based methods and strategies for training and education. John Wiley & Sons.
- Nacke, L. E., & Deterding, C. S. (2017). The maturing of gamification research. Computers in Human Behaviour, 450-454.
- Stein, J., & Graham, C. R. (2014). Essentials for blended learning: A standards-based guide. Routledge.

Enhancement of Engineering Higher Education Systems and Teaching Staff Training Development in Yangon Technological University (YTU) in Myanmar

#Higher Education in Engineering #Teacher Training
#Implementation Procedures

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Myanmar's engineering higher education system encourages the learning model of life-long circumstance and essentially applicable. Accordingly, the role of technological universities is responsible for more dominant roles in practical features.

01

Myanmar's approach to improve Engineering Higher Education.

Myanmar Engineering Higher Education System (especially YTU) emphasizes both the importance of traditional institutions of engineering higher education and their collaboration with local and/or global industries and local and/or international governments. This innovative approach no longer supposes students to pursue the highest possible academic achievement as young as potential, but relatively to learn and acquire fresh skills all the way through their lives.

► Research-Based Learning (RBL)

Engineering higher education shall act out and formulate students for real life as much as imaginable. It motivates on upskilling the students through real-life research-based learning by conveying problems of industries into campuses and vice-versa.



► Stimulate Digital Transformation (SDT)

Yangon Technological University in Myanmar is already occupying on building students experienced in languages for engineering degree programmes with digital technology. Besides in IT-promoted digital transformation and digital technology-related courses that are apprehended in YTU are also roughly of the utmost popular choices. Consequently, concentrating more on digital transformation is imperative.

► Differentiate Engineering Higher Education Corridors

The reform gives emphasis to on the significance of facilitating students and teaching staffs recognize and track their concentration, as it would preserve them inspired to learn over and done with life and complete prowess in the learning process.

► Boost Lifelong Learning (BLL)

Through IT-promoted Digital Transformation encourages life-long learning in engineering education. At this juncture, it is acquainted with assorted interests and recognized talents, boosting a lifelong tracking down of prowess from end to end numerous corridors, implementation of an unfluctuating extensive characterization of excellence based on skills prowess, more willingly than preceding academic consequences.

Implications

YTU's line of attack on the way to engineering higher education is to benefit engineering students to realize the solutions for real-life problems and by extending the role of technological universities in Myanmar (in line with Washington Accord Institutions), an impression of technological universities is no longer restrained to engineering higher education and changing the lives of engineering students.

02

Teaching Staff Training Development in Yangon Technological University

Yangon Technological University (YTU) is the Centre of Excellence (CoE) in Engineering Institute of Myanmar.

It has begun as the Burma Institute of Technology (BIT) established in 1961 to offer degree courses in engineering for some people. In 1964, BIT became Rangoon Institute of Technology (RIT), which is only one of Myanmar's engineering universities.

The university was renamed Yangon Institute of Technology (YIT) in 1990 and was placed under the Ministry of Science and Technology in 1997. In 1998, the name of the university was changed to Yangon Technological University (YTU).

It also provides extensive engineering degree programs and the best Centre for engineering professional development and continuing engineering higher education contributions for teaching staffs traditionally.



Figure 1.
Rangoon Institute of
Technology (RIT) Logo



Figure 2.
Yangon Technological
University (YTU) Logo

To work for the needs of the Ministry of Science and Technology (MOST) functioned closely with it for the engineering professional development of the definite number of technological teaching staffs in Myanmar. YTU conduct initial engineering teaching staff preparation program based on Prediction, Observation, Discussion, and Synthesis (PODS) methodology to formulate students with the intention of they would be greatly effective teaching staffs on the day they enter technical classrooms and grow into responsible for student learning at Technological Universities in Myanmar. It delivers specific content and experiences that would get someone ready them with the knowledge, skills and personalities to the engineering students. YTU also affords opportunities to learn and work overseas to the engineering teaching staffs and engineering students. With this worldwide exposure, the perspectives of engineering teaching staffs and engineering students nurture to suit their personal.

YTU has been playing an essential role as an engineering educational institute to support Myanmar's engineering higher education by formulating engineering teaching staffs to give a grounding in the national engineering curriculum, formulating future engineering education leaders, providing continuing engineering professional learning, and conducting technological research that would lead to enhancements in reality.

► Hosting the Teaching Staffs' Training at YTU

YTU always hosts the engineering teaching staffs' training in May and in November every year. YTU emphasizes that trainings for enhancing the research skills in specific areas of young researchers and promoting the education professionals of young teaching staffs from technological universities in Myanmar.



Figure 3. Teaching Staffs' Training at YTU
by Japanese Professor (Prof. Dr. Yoshihiro Ishitani)

► Utilizing the PODS Methodology (Teaching Purposes)

In order to get the accomplishment of Research-Based Education (RBE) system, the effective teaching method like PODS is very important for teaching and learning activities at YTU. The PODS activities have been started at the beginning of 2017 at YTU. Most of the faculty members of YTU could easily follow the fundamental concept on the effective teaching and learning activities in their class and laboratory.

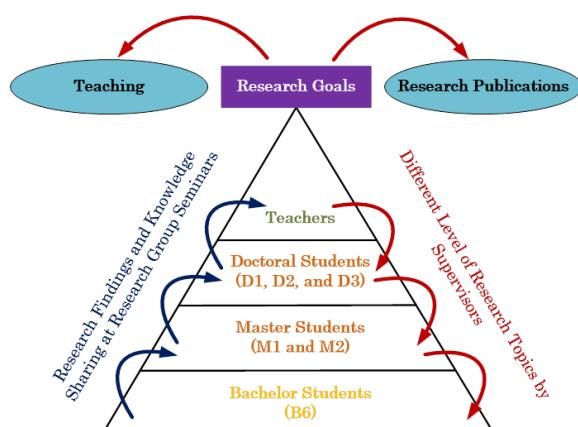


Figure 4. Formulation of Research Groups Activities at YTU

► Leading the Research Groups Activities (Research Purposes)

The research publications are one of the credits for the establishment of Research University. In this model, the first level is the final year or sixth year students, and the second level is the first year and second-year master students, the third level is the first year to third-year doctoral students, and the top-level is the teachers. At first, teachers announced their research themes and topics for creating their research groups. The different levels of research topics are provided by the respective supervisors or teaching staff at YTU.

The leader is those teachers, and he/she introduced his/her research works in front of all students. That teacher always creates research group seminars every week. All research group members have to present their understanding of research findings and knowledge sharing at the research group seminars. That teacher always gives valuable advice to his/her research group members. The research group members follow the suggestions of that teacher. Finally, they have got their research achievements after completing the research activities based on different levels. The teachers shall have to transform their research outcomes into research publications and teaching material. In this regard, the teachers have the dominant teaching qualifications based on the research achievements by researching with research groups at university. The consequence of research-based education is directly affected by the Outcome-Based Education system with research university establishment.

References

Hla Myo Tun, "Improvement of Teaching Staff Qualification in line with Research-Based University and Outstanding Laboratory Facilities Fulfillment for Quality Engineering Education towards Outcome-Based Education System", International Conference on Engineering Education Accreditation (ICEEA) 2021, January 14-16, Yangon, Myanmar.

Hla Myo Tun, Thida Than, Myint Myint Than, Khin Sandar Tun, Zaw Min Naing, Maung Maung Latt, Win Khaing Moe. Analysis on Research and Education for Electromagnetic-Applied Subjects with Finite Difference Time Domain Theory, American Journal of Electromagnetics and Applications. Volume 6, Issue 1, June 2018, pp. 6-16. doi: 10.11648/j.ajea.20180601.12

NAM S&T Newsletter, A Quarterly of the Centre for Science and Technology of the Non-Aligned and Other Developing Countries (NAM S&T Centre), Vol. 32, No. 2, July - September 2022, <https://www.namstct.org/DOCU/newsletters/Newsletter-July-September-2022.pdf>

https://en.wikipedia.org/wiki/Yangon_Technological_University

Outcome-Based Education Systems and Learning Management Systems (LMS) Implementation in Yangon Technological University (YTU) in Myanmar

#Learning Management Systems #e-learning System
#Blended Learning Methodology

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Learning Management Systems (LMS) encourages the advanced learning model of lifelong learning and continuous quality improvement. For that reason, the role of LMS in Yangon Technological University is in control for more leading roles in professional developments of teaching staffs and engineering students.

01

Establishment of Outcome-Based Education Systems at YTU.

Yangon Technological University (YTU) (Formerly names of Burma Institute of Technology (BIT) or Rangoon Institute of Technology (RIT) or Yangon Institute of Technology (YIT)) was founded in 1965. The activities of education and research purposes of YTU gradually increased until 2012. The participations of a lot of alumni of YTU, industrial people and the government are great opportunities to enhance the contribution of excellence teaching before 2012. The transformational shift from traditional university to Research-based University was inspired by internationalization and collaboration experience after 2012. Japanese Government mainly contributed to the Project on Enhancement of Engineering Higher Education through Research Activities in YTU intended to the development of all Technological Universities in Myanmar. The new intake of HR development programme for outstanding student recruitments under that project was launched in 2013 and the promotion of teaching and research quality for teaching staffs was implemented by achieving the master and doctoral degrees through research works at Japanese Supporting Universities (JSUs). The important contribution of JSUs are Kyoto University, Okayama University, Kanazawa University, Nagasaki University, Chiba University, Niigata University and Kumamoto University in Japan. YTU sent over fifty staff to those universities to promote their outstanding research activities through doctoral degree programme in 2014. During 2014 to 2019, the PhD graduates could contribute their experience on research-based activities and outstanding teaching to the highly qualified engineering students.

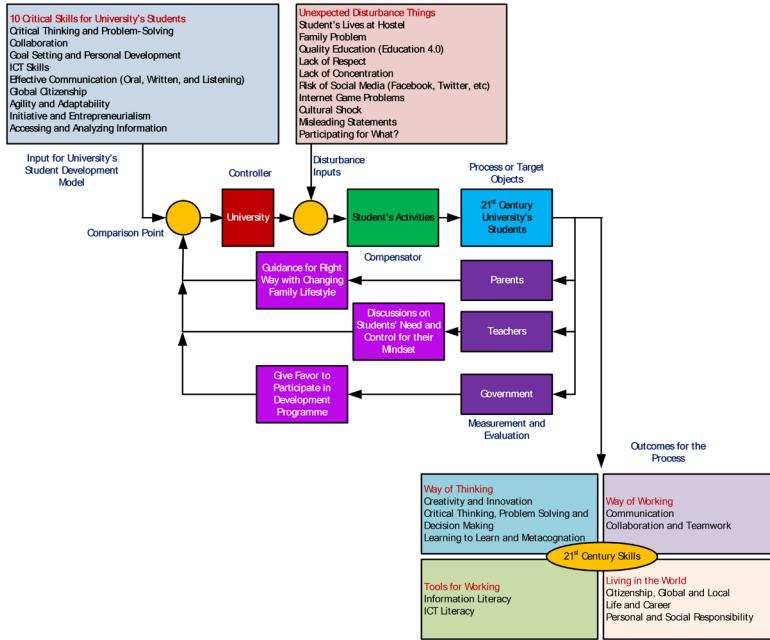


Figure 1. Analysis Model for Outcome-Based Engineering Education System

Due to the efforts of all staff of YTU, a full accreditation certificate was awarded to YTU by FEIAP through MEngC in 2019. There are seven criteria under the FEIAP level such as (1) Programme Educational Objectives (PEOs), (2) Graduate Attributes (GAs), (3) Curriculum and Syllabus, (4) Academic and Supporting Staff, (5) Students, (6) Facilities, and (7) Quality Management System (QMS).

The top management of YTU guided the right way to implement the OBEE system in line with the Quality Objectives and Quality Policy based on effective PEOs and GAs standard. The development of Curriculum and Syllabus for all engineering departments was led by seven JSUs. There are two formal trainings and discussion meetings called "Staff Training at YTU and MTU (called Mandalay Technological University)" in a year especially occurred in May and November. All staff from YTU and MTU actively participated in those trainings to promote and develop the effective design of curriculum and syllabus through model teaching of sample subjects. Consequently, there are 11 Engineering departments which were fully accredited by Myanmar Engineering Council (MEngC), a full member of Federation of Engineering Institutions in Asia and Pacific (FEIAP), and MEngC is now trying to promote the national level to international level which is called the full signatory of Washington Accord over and done with the Enhancement of Engineering Higher Education (EEHE) and High Quality Research in YTU.

The input of that model is ten critical skills for university students, and the disturbance input is unexpected disturbance things. The feedbacks are depending on the parents, teachers, and government. The outcomes for the process of this model is intended to obtain 21st-century skills.

02

Moving Froward to Early LMS of YTU.

Due to the COVID-19 pandemic, the face-to-face teaching and learning systems were temporarily stopped in Myanmar. The government of Myanmar tried to promote the e-learning system in all universities. The Ministry of Science and Technology (MOST) motivated to introduce the effective teaching and learning systems in Yangon Technological University (YTU). From March 2020 to May 2020, the teaching and learning in person were broken. After May 2020, the online teaching approaches via Zoom Application, Microsoft Teams, Google Meets were introduced in YTU. Consequently, now just we investigate some good examples of how they leveraged technology in engineering education before COVID-19.

► Video Conferencing Research at Yangon Technological University

From 2007 to 2010, the Minister of Ministry of Science and Technology (MOST) motivated to the Electronic Engineering Researchers and Computer Engineering and IT Researchers for doing research works concerning the video conferencing technology for online teaching and learning platform improvements.

In late 2010, the unique software environment was developed and those researches were introduced to create the early Learning Management System (LMS) in Myanmar but the lack of technological advancements were blocking at that time.

► Preparation of Online Teaching Materials with Microsoft PowerPoints

In YTU, all teaching staffs shall have to prepare their teaching materials with PowerPoints presentation files. They added their videos and voices in that files for online teaching and learning platforms after May 2020. In response to the COVID-19 pandemic, the YTU in Myanmar was shifted to conducting many classes over Zoom. And they are quiet keeping most activities online with the exemption of practical and laboratory sessions that must be completed on campus.

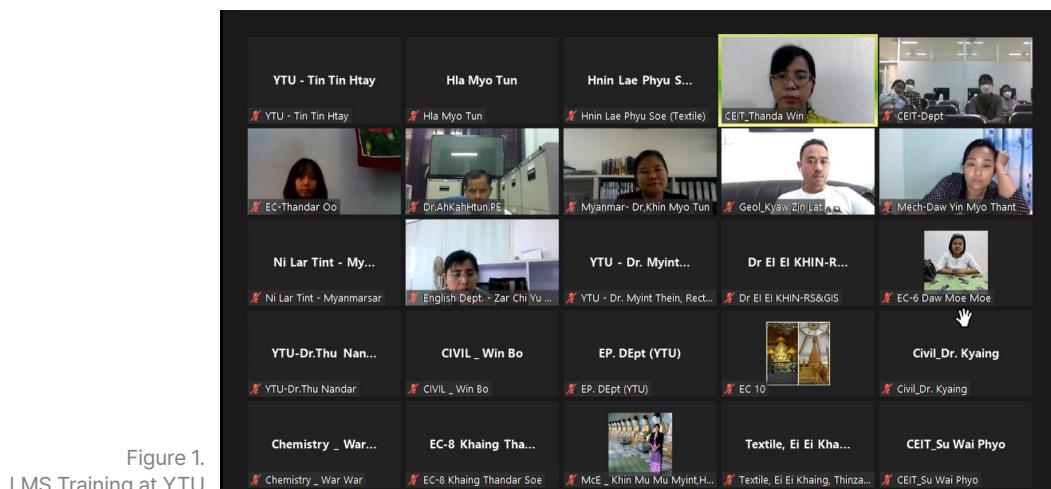


Figure 1.
LMS Training at YTU

03

Establishment of Learning Management Systems at YTU.

YTU started to establish the own Learning Management Systems (LMS) of YTU in January 2021. All engineering departments and Department of Architecture completed all teaching materials in digital format and assessment processes such as quiz, assignments, tutorials and so on. The Department of Computer Engineering and Information Technology hosted to establish the YTU LMS in central server of YTU effectively.

Covid-19 has speeded up the timeline for educational transformation. At the same time, challenges such as a privation of one and the same resources and how teaching staffs engage engineering students in online modules are emerging. At the national level, Ministry of Science and Technology (MOST) is frustrating to solve the challenges. We describe the obstacle to sustaining digital transformation and the efforts of Singapore's MOE.

► Disregarding Community Discrimination

e-learning system foundations a cavernous gap between students than they are in physical school.

Students from low income families may have smaller number of resources at their home.

► Online Teaching Methodology

Some teaching staffs who do not belong to adequate learning familiarity in online sceneries could be users of information technology not energetic learning coaches.

MOST newly arrange for opportunities for engineering teaching staffs to advance their design competencies in engineering teaching and learning processes.

► Allocating Sustainability Challenges

Supporting digital learning necessitates teamwork determinations at all levels, together with teachers and parents.

As revealed above, Myanmar uninterrupted effort to revolutionize the existing engineering education system with the intention of they can become accustomed rapidly to the transition of the engineering educational system from in person to e-learning. This would outcome in Myanmar hang around into the future of others in the e-learning characteristic.

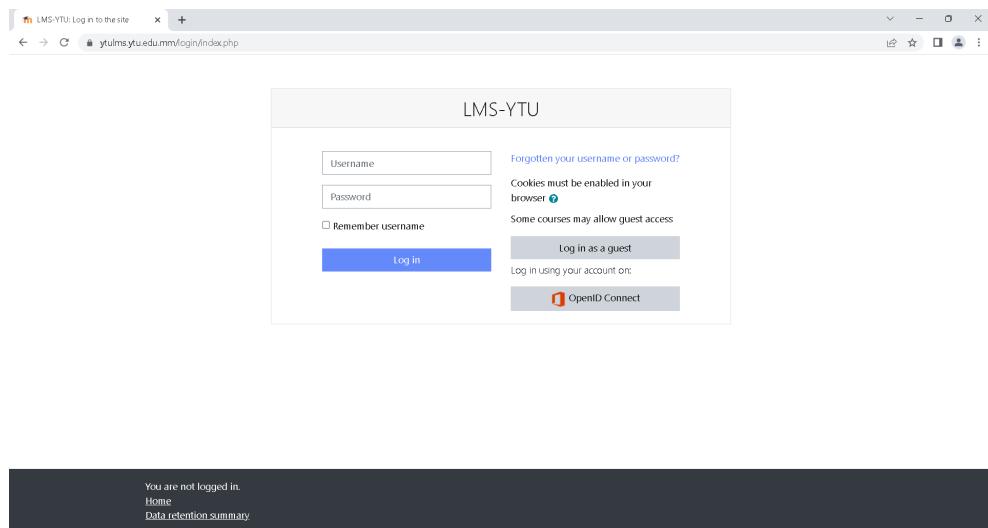


Figure 2.
YTU LMS Platform

Implications

Myanmar's initial acceptance of digital transformations finished a fast and relaxed shift to online education for the duration of the pandemic. This makes us keep thinking about again the trend of education for the forthcoming and several extraordinary circumstances.

References

Hla Myo Tun, "Improvement of Teaching Staff Qualification in line with Research-Based University and Outstanding Laboratory Facilities Fulfillment for Quality Engineering Education towards Outcome-Based Education System", International Conference on Engineering Education Accreditation (ICEEA) 2021, January 14-16, Yangon, Myanmar.

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https://en.wikipedia.org/wiki/Yangon_Technological_University

Schoolbook: DLSUD's Online Platform for eLearning

#cypherlearning #lms

Roland Lorenzo M. Ruben; Constantino T. Ballena / De La Salle University - Dasmariñas:



This article presents the online platform for eLearning of De La Salle University-Dasmariñas, which has been branded as Schoolbook. The article highlights the features and benefits of NEO LMS and how the Schoolbook can help educators create engaging and interactive eLearning courses.

01

Introduction

The rapid advancements in technology have led to a significant shift in the way people learn and access educational materials. Online learning platforms have become increasingly popular due to their convenience and flexibility, making it possible for learners to access learning resources from anywhere, at any time. One of the most robust eLearning platforms available today is NEO LMS by Cypher Learning. This article will explore the features and benefits of NEO LMS and how it can help educators create engaging and interactive eLearning courses.

► Overview of NEO LMS

NEO LMS is a cloud-based platform designed to cater to the needs of both educators and learners in the eLearning environment. The platform offers an intuitive interface, robust features, and customization options that make it suitable for various types of eLearning courses, from K-12 and higher education to corporate training and development.

One of the most significant advantages of using NEO LMS is its versatility. The platform is accessible from any device with an internet connection, making it an ideal choice for distance learning and hybrid learning models. It supports a wide range of file types, including multimedia files, quizzes, and assessments, making it easy to create engaging and interactive learning experiences.

NEO LMS is the platform that De La Salle University - Dasmariñas has been using since 2010. We branded it as Schoolbook, a name that is easy to remember.



02

Features and Benefits of NEO LMS

► Automated Grading and Feedback

NEO LMS allows instructors to set up automated grading and feedback system, which can save a significant amount of time and effort. Instructors can create discrete types of assessments and quizzes that are automatically graded, allowing them to focus on providing personalized feedback to learners.

There was a time when quizzes were given onsite, students used yellow pad papers to write on their answers and the teacher collected them, graded them, and encoded the scores in their class records. Sometimes, teachers returned graded quizzes and reviewed the results with students. We also had problems with missing papers and ungraded papers. With automated grading and feedback system, students receive instant feedback and see their scores at once after taking the quiz.

The Automated Grading and Feedback feature of the Schoolbook makes the grading process efficient, correct, and objective.

► Analytics

NEO LMS comes with robust analytics features that help educators track the progress of individual students, identify areas where they need help, and tailor their teaching to students' needs. The platform provides detailed reports on student performance, making it easy for instructors to identify trends and make data-driven decisions.

There is analytics feature on the lessons page. It records the first and last time a student visits a specific lesson, as well as the total number of times they have visited the lesson on a given day and the amount of time they spent there.

Figure 1 shows the number of students who visited each lesson and the amount of time they spent there.



Figure 1. Graph of lesson analytics

Figure 2, however, presents the Time column of the students' tab showing the total time spent on the class by students.

Name	Progress	Score	Grade	Due	Awards	Portfolio	Mastery	Time (minutes)	Enrolled	Last visited
Blackmore, Jeremy	80%	8	B	7	-	-	-	00:09:30	Jan 4, 2019 2d days ago	
Demo, Admin	80%	7	D	13	-	-	-	00:01:14	May 13, 2020 2d days ago	
Dillon, James	80%	8	A-	4th	5	20	-	00:00:41	Aug 6, 2018 2d days ago	
Douan, Tom	80%	8	B+	2nd	6	17	-	00:00:23	Aug 6, 2018 2d days ago	
Hopper, James	80%	8	B	7th	6	13	-	00:00:12	Aug 6, 2018 2d days ago	
Jackson, Phil	80%	7	C+	6th	6	12	-	00:00:27	Aug 6, 2018 2d days ago	
Jefferson, Tom	80%	8	B	7th	7	16	-	126:11:52	Aug 6, 2018 2d days ago	
Johnson, Sally	80%	8	B+	4th	4	16	1	00:00:26	Aug 6, 2018 2d days ago	
Karol, Samy	80%	8	B+	3rd	3	17	-	00:00:16	Aug 6, 2018 2d days ago	
McGregor, Tom	80%	7	F	9th	9	9	-	00:00:53	Aug 6, 2018 2d days ago	
Mullon, Tracy	80%	7	D	13th	13	6	-	00:00:48	Aug 6, 2018 2d days ago	
Philip, Jeremy	80%	8	B	5th	5	15	-			

Figure 2.
The Time column in the students' tab.

When teachers click on the student's time, they will see a detailed chart of the time spent on each lesson.

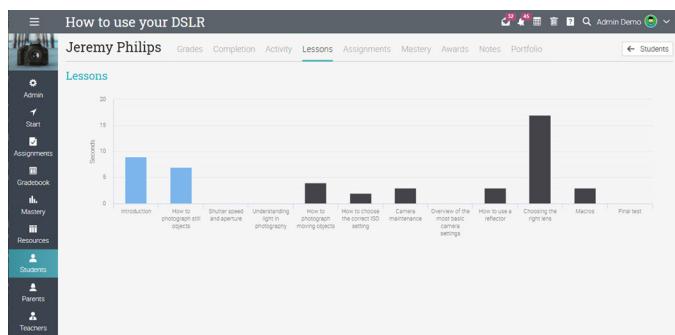


Figure 3.
Student's individual chart on lesson engagement.

Aside from the lessons page, there is also the analytics in the Gradebook where teachers can see a graphical representation of students' progress on all their assignments (figure 3).

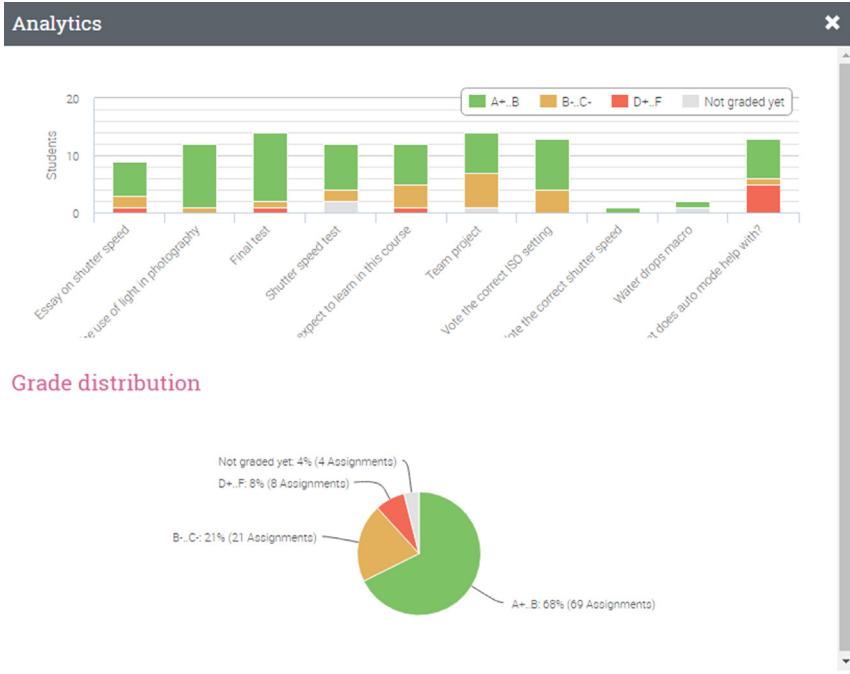


Figure 4.
Analytics chart in the Gradebook.

For the individual performance of students, there is analytics that shows the grade distribution of the student's performance in all his/her assignments (Figure 4).

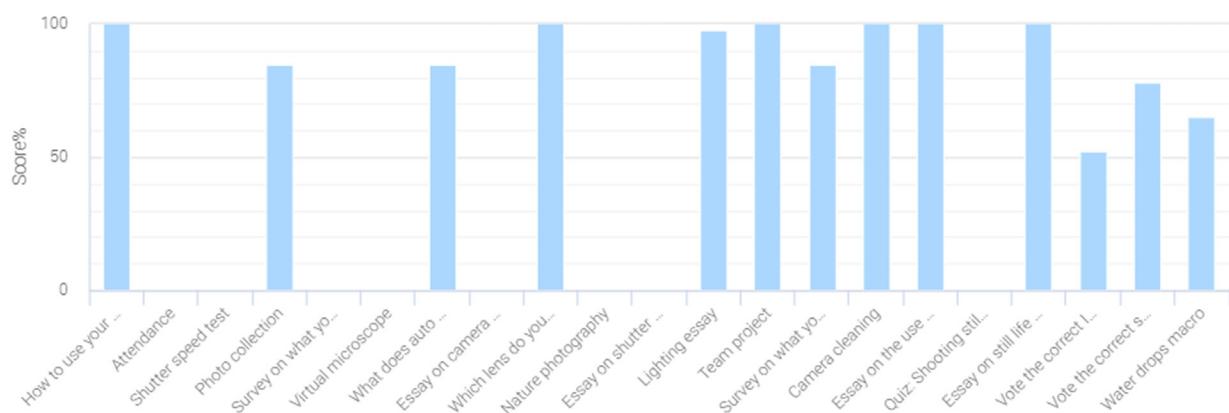


Figure 5. The student's grade distribution analytics.

The analytics features help instructors assess the effectiveness of their teaching and help them figure out how to improve their courses continually.

The use of learning analytics can help teachers understand the broader learning environment and uncover ways to improve overall learning outcomes. The collection and analysis of teaching and learning data allows higher education institutions to remain competitive and effective in the development of high quality, rapidly changing education. LMS analytics can also show patterns in learners' data and empower teachers to make data-driven decisions to improve their strategy; thus, deliver exceptional training experiences.

► Customization

NEO LMS offers a wide range of customization options, such as the ability to create custom themes and templates, to personalize the learning experience. Instructors can add their branding and logos, making the platform feel like an extension of their organization.

DLSUD has customized the platform and branded it as Schoolbook. The school colors and images have been infused (Figure 6).



Figure 6. The Schoolbook login page.

The platform also integrates a variety of external tools, such as Google Apps, Microsoft Office, and Zoom, making it easy to add new features and functionality as needed.

In most cases, teachers are the original content creators. It has only been in the last 30 years that teachers have begun to rely on pre-made content for their classes. These content sources have been frequently created from purchased class materials from book publishers. However, as teachers discover the need for content that is specific to their classroom/project context, they start to create their own content. This then leads many educators down the path of learning to create higher quality content for new online learning environments. Lastly, the platform's customization options help instructors create courses that meet the needs of their learners, making the learning experience engaging and interactive.

► Security

Security is a critical aspect of any LMS. Learning Management Systems equipped with anti-virus software safeguard user data and e-learning content. Backup data storage is an important part of an LMS.

NEO LMS has a robust security framework, ensuring that data is kept safe and secure. The platform complies with various international data protection standards, such as GDPR, COPPA, and FERPA. Best practices for securing the platform include using strong passwords, keeping software up-to-date and using firewalls. The Schoolbook offers features such as two-factor authentication and user permissions to prevent unauthorized access to stored data. The security features help instructors and learners feel safe and secure while using the platform.

► Collaboration

Collaboration is a critical 21st-century skill that students must learn. While some students may naturally be better at collaborating than others, collaboration as a skill is something that must be learned. The 21st Century Learning Design framework identifies six dimensions of 21st-century skills that learners need for life and work. One of these dimensions is collaboration.

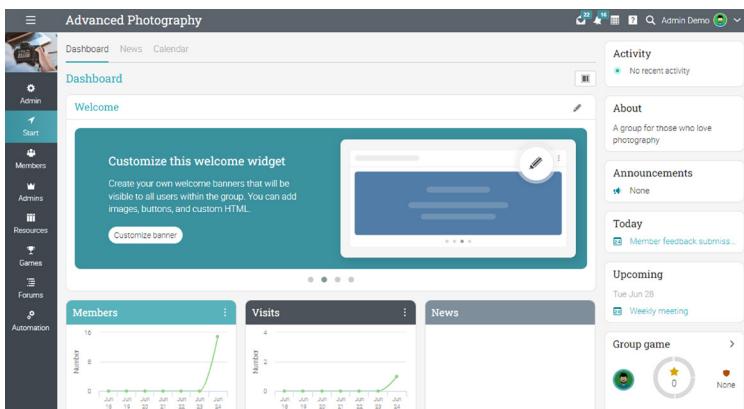


Figure 7. The dashboard of the group's page.

NEO LMS encourages collaboration and interaction between learners and instructors. The platform allows instructors to create discussion forums, chat rooms, and group projects, making it easy for learners to engage with one another and work together. Group pages where members can communicate with each other, share resources and work together are created with team assignments. Each group has its own dashboard, a news feed, a calendar, a resources area, forums, wikis, blogs, chat rooms, and RSS feeds (Figure 7).

Finally, collaboration features help learners develop essential skills such as communication, teamwork, and problem-solving.

03

Conclusion

NEO LMS by Cypher Learning is an excellent choice for educators looking to create engaging and interactive eLearning courses. Its versatility, flexibility, and security features make it a robust platform for a wide range of use cases, from K-12 and higher education to corporate training and development. The platform's robust analytics features, and automated grading and feedback systems help teachers identify areas where learners need help and provide personalized feedback. The customization options allow instructors to create a personalized learning experience that meets the needs of their learners, and the platform's collaboration features encourage interaction and engagement.

Implications

Educational institutions' decision to shift to online learning is noble indeed. But for the shift to result in a remarkable success, a methodic approach for the choice of the right LMS is indispensable. DLSUD's choice of NEO LMS and its decision to brand it as Schoolbook with a variety of features to ensure engaging and productive learning environment have facilitated DLSUD's success in offering online learning.

References

- Collaboration: An Essential Skill for 21st Century Learners (2019). Retrieved from Collaboration: An Essential Skill for 21st Century Learners | Selwyn School
- Cypher Learning (n.d.). NEO LMS. Retrieved from <https://www.neolms.com/>
- EdTech Magazine (2019). What to Look for in a Learning Management System. Retrieved from <https://edtechmagazine.com/k12/article/2019/05/what-look-learning-management-system>
- eLearning Industry (2020). NEO LMS: The Future of Learning Management Systems. Retrieved from <https://elearningindustry.com/neo-lms-the-future-of-learning>
- Famure, L. (2021). Using LMS Analytics to Gain Learning Culture Insight. Retrieved from Learning Management System Analytics: Gain Learning Culture Insight (elearningindustry.com)
- Learning Analytics (2023). Retrieved from Learning Analytics: Methods, Challenges and How to Implement [2023] (valamis.com)
- Moussavi, M., Amannejad, Y., Moshirpour, M., Marasco, E., & Behjat, L. (2020). Importance of Data Analytics for Improving Teaching and Learning Methods. In: Alhajj, R., Moshirpour, M., Far, B. (eds) Data Management and Analysis. Studies in Big Data, vol 65. Springer, Cham. https://doi.org/10.1007/978-3-030-32587-9_6
- Teachers as Content-Creators (2020). Retrieved from Teachers as Content-Creators - TheDigitalTeacher.org
- 21st century learning design: A Learning Path. (n.d.) Retrieved from 21st century learning design - Training | Microsoft Learn

Summary of ASEAN Plus Republic of Korea and ASEAN University Network Experts' Meeting Hosted by Thai MOOC: Empowering MOOCs for Sustainable Lifelong Learning in the ASEAN Region: Insights from Regional Experts' Meeting (January 2023)

#ThaiMOOC #TCU #ASEAN #MOOCs #LifelongLearning
#OnlineEducation #SustainableLearning #HigherEducation
#MicroCredentials #CreditTransfer #QualityAssurance
#DigitalLearning #Collaboration #Inclusivity #SkillDevelopment
#CompetencyBasedLearning #OpenEducationResources
#MOOCExchange

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This chapter presents a comprehensive summary of the ASEAN Plus Republic of Korea and ASEAN University Network Experts' Meeting hosted by Thai MOOC in January 2023, focusing on empowering MOOCs for sustainable lifelong learning in the ASEAN region. Regional experts from the ASEAN University Network (AUN), Indonesia, Malaysia, the Philippines, Republic of Korea, and Thailand shared their experiences, achievements, and future plans concerning MOOCs and online learning. The discussions highlighted the role of MOOCs in expanding access to education, promoting lifelong learning, and addressing the skill gaps and mismatches in the region. The paper emphasizes the importance of collaboration and knowledge sharing among ASEAN countries to develop and improve MOOC initiatives, ensure quality assurance, and create sustainable models for lifelong learning. Additionally, the paper explores the potential of MOOCs for transforming higher education, fostering industry-academe partnerships, and promoting inclusivity in the ASEAN region.

Thai MOOC platform hosted the ASEAN Plus Republic of Korea and ASEAN University Network (AUN) Experts' Meeting

► The rapid growth of Massive Open Online Courses (MOOCs) has significantly impacted the landscape of higher education and lifelong learning worldwide. In the ASEAN region, MOOCs have emerged as a promising means to promote sustainable lifelong learning and address the diverse educational needs of the region's population. In response to this development, the Thai MOOC platform hosted the ASEAN Plus Republic of Korea and ASEAN University Network (AUN) Experts' Meeting on 26 and 27 January 2023 at Asia Hotel, Bangkok, Thailand, to facilitate discussions on empowering MOOCs for sustainable lifelong learning in the ASEAN region.



Figure 1. The Experts' Meeting Poster

The meeting brought together representatives from six organizations and countries: the AUN, Indonesia, Malaysia, the Philippines, the Republic of Korea, and Thailand. These countries and organizations shared their experiences, progress, and achievements in MOOCs and online learning. The meeting aimed to foster cooperation and exchange of best practices among the participating countries, identify common challenges, and explore strategies to enhance the quality and accessibility of MOOCs in the ASEAN region.

Participated AUN, Republic of Korea, and ASEAN experts include:

- Dr. Choltis Dhirathiti: ASEAN University Network (AUN) Executive Director
- Adjunct Professor Dr. Heon Joo Suh: Director of External Affairs at National Institute for Lifelong Education, Republic of Korea
- Professor Dr. Paulina Pannen: Chairman ICE Institute, Universitas Terbuka, Indonesia
- Associate Professor Dr. Nurbiha A Shukor: Deputy Director, Center of Advancement in Digital and Flexible LearningUTM CDex, Chair Malaysia Public Universities e-Learning Council (MEIPTA), Malaysia
- Professor Dr. Melinda Dela Pena Bandalaria: Chancellor and Professor, University of the Philippines Open University, The Philippines
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- Associate Professor Dr. Anuchai Theeraroungchaisri: Thailand Cyber University Project, Ministry of Higher Education, Science, Research and
- Professor Dr. Jintavee Khlaisang: Thailand Cyber University Project, Ministry of Higher Education, Science, Research and Innovation
- Dr. Vorasuang Duangchinda: Sripatum University, Thailand as the Master of Ceremony



Figure 2.
The Experts

This paper summarizes the insights and recommendations from the regional experts' meeting, highlighting the role of MOOCs in transforming higher education and promoting lifelong learning in the ASEAN region. The discussions focused on various aspects of MOOCs, including quality assurance, micro-credentialing, partnerships with industry, accessibility, and sustainability. Through this paper, we aim to provide a comprehensive understanding of the current state of MOOCs in the ASEAN region and offer valuable insights for future developments in online learning and lifelong education.

► Thailand Cyber University (TCU), the organizer of Thai MOOC, values the diverse opinions, experiences, and practicality offered by experts from various countries and organizations. By hosting this meeting, TCU aims to create a platform for regional stakeholders to share their knowledge, experiences, and best practices in the development and implementation of MOOCs. This collaborative effort is expected to pave the way for more effective and sustainable MOOCs for lifelong learning in the ASEAN region and beyond.

With the growing prominence of Massive Open Online Courses (MOOCs) in the ASEAN region has opened up new opportunities and challenges for higher education institutions and lifelong learners. As MOOCs continue to evolve and impact the way we approach education, it is crucial to learn from the experiences of different organizations and countries to maximize their potential benefits and address the challenges that they present. In this paper, we provide a summary of the contributions from each representing organization and country, followed by an analysis and conclusion that draw on the insights and recommendations discussed during the ASEAN Plus Republic of Korea and ASEAN University Network (AUN) Experts' Meeting, hosted by Thai MOOC in January 2023.

Order of the summary is as follows; 1) ASEAN University Network (AUN) 2) Indonesia 3) Malaysia 4) the Philippines 5) Republic of Korea 6) Thailand (Host nation)

Implications

AUN, ASEAN and Republic of Korea Experts Share Insights to Strengthen MOOCs for Sustainable Lifelong Learning: Collaborative Pathways Emerge from Regional Meeting Hosted by Thai MOOC"

02

Prof. Dr. Paulina Pannen
Chairman of ICE Institute
(Indonesia Cyber Education
Institute), Universitas
Terbuka, Indonesia

Overview of the ASEAN Qualifications Framework for Online Learning

- ▶ Dr. Choltis Dhirathiti presented an overview of the ASEAN Qualifications Reference Framework (AQRF), which aims to promote a higher quality of the qualification system by enhancing learning outcomes. The AQRF has six objectives, including support for recognition of qualifications, promotion of higher-quality qualifications systems, and development of qualifications frameworks that encourage lifelong learning.

Dr. Dhirathiti also discussed the implementation of the AQRF in each country and the ASEAN University Network's (AUN) current works on the "Measuring and Comparing Learning Outcomes in (Southeast) Asia" (CALOHEA) - Erasmus+ Project. The CALOHEA project aims to promote the internationalization of higher education institutions in Southeast Asia and involves the participation of thirty-one institutions from eight Asian countries and five European countries.

The AUN Quality Assurance emphasizes improvement and compliance to ensure education outcomes align with the demands of the workforce. Collaboration and consultation with multi-sector stakeholders are crucial for MOOC providers to maximize their strengths, capitalize on emerging trends and opportunities, and ensure contextual relevance in designing and implementing qualification assessments.

- The AQRF is an important framework for promoting higher quality of the qualification system and enhancing learning outcomes. The CALOHEA project has offered significant benefits to educational institutions in Southeast Asia, including clear agreements on graduate expectations in CALOHEA subject areas, a shared approach to measuring student workload, and authentic learning outcomes assessments. The AUN Quality Assurance is considering integrating online learning into its framework but needs more experience, and the MOOCs providers' network is expected to develop the Quality Assurance framework.

Implications

AUN Encourages Collaborative Approach to Enhance MOOCs for Lifelong Learning

03

Prof. Dr. Paulina Pannen
Chairman of ICE Institute
(Indonesia Cyber Education
Institute), Universitas
Terbuka, Indonesia

The Progress and Achievements of MOOCs and Online Learning in Indonesia

- Prof. Pannen provided an overview of Indonesia's Distance Education Strategy and its focus on expanding access to higher education and promoting employability skills through online courses and micro-credentials. She presented the country's policies and regulations regarding distance learning and emphasized the need for collaboration among universities to improve the sustainability of MOOCs.
- Prof. Pannen also discussed the potential of MOOCs in Indonesia and the challenges the country faces, including low digital literacy among faculty and the need for improved collaboration among universities within and across countries. She presented the results of her research on the socio-emotional experience of students during online learning and the factors influencing their decisions to enroll in online courses.
- Indonesia has made significant progress in expanding access to education through online learning and MOOCs. However, the country still faces challenges such as low digital literacy among faculty and limited collaboration among universities. There is a need for continuous improvement in the online learning system to meet the expectations and satisfaction levels of students, particularly the younger generation.

Implications

Indonesia's Efforts to Expand Access and Improve Quality of Education through MOOCs and Online Learning

04

Assoc. Prof. Dr. Nurbiha A Shukor

Deputy Director, Center of Advancement in Digital and Flexible Learning UTM CDex, and Chair, Malaysian e-Learning Council for Public Universities (MEIPTA), Malaysia

The progress and achievements of MOOCs and online learning in Malaysia

- ▶ Assoc. Prof. Dr. Nurbiha A Shukor provided insights on Malaysia's progress and achievements in MOOCs and online learning. The Malaysia Education Blueprint 2020-2025 guides MOOC development in Malaysia, with a focus on "Shift #9 Globalized online learning" and "Shift#3 Nation of lifelong learners." Malaysian MOOCs plan to produce 70% of courses in blended learning mode in 2025. Currently, accredited courses are byte-size courses carrying up to only one credit. Academic programs must satisfy two requirements to be classified as Open and Distance Learning (ODL). Malaysian public universities have created 192 micro-credentials, 1376 MOOCs, and 945 Open Coursewares (OCWs) and provided MOOC training courses to improve skills and knowledge.

The Experiential Learning and Competency-based Education Landscape (EXCEL) curriculum framework includes Personalized Experiential Learning (POISE) that allows learners to discover their interests by taking up to 40 credits worth of international MOOCs and micro-credential courses and transfer credits within the framework. Students can transfer up to 30% of their credits through MOOCs and another 30% through prior work experience, allowing them to transfer 60% of their online credits towards the degree.

- ▶ Malaysia's education blueprint guides the MOOC development in the country with a focus on globalized online learning and lifelong learning. Malaysian public universities have developed various online learning initiatives, and MOOC training courses have attracted a substantial number of participants. The POISE framework and MOOC credit transfer processes have helped learners personalize their learning experience and enhance their skills and knowledge. The transfer of credit based on work experience and MOOC courses can significantly reduce skill gaps and mismatch.

Implications

Malaysia's Vision for Sustainable MOOC Development and Lifelong Learning

05

Prof. Dr. Melinda Dela Pena
Bandalaria

Chancellor and Professor,
University of the Philippines
Open University, Philippines

The progress and achievements of MOOCs and online learning in each country - The Philippines

- ▶ Prof. Bandalaria shared the experience of the University of the Philippines Open University (UPOU) in providing open and fully online education to learners in the gig economy, out-of-school youth, and dropouts. UPOU has offered MOOCs and micro-credential courses with certificates of completion since 2017. During the pandemic, UPOU developed a model of inclusive training through webinars and MOOC combinations, allowing learners to revisit recorded content and interact with teachers and their peers. The number of learners spiked during the pandemic. Prof. Bandalaria recommended two frameworks for evaluating the quality of MOOCs and also developed the quality of instruction in UPOP MOOCs. She proposed several methods to sustain MOOC initiatives, including implementing institutional policies, providing free certification, partnering with industry, securing research funds, tapping into Corporate Social Responsibility (CSR) funds, integrating with micro-credentialing and stackable credits, gig learning certification, and Universal Design for Learning. She also cautioned against the pitfalls of MOOCs for higher education.
- ▶ The experience of UPOU can be a valuable resource for other universities seeking to develop their MOOCs in the Philippines. The proposed sustainability methods and cautionary notes from Prof. Bandalaria can help improve the quality of online education in the country.

Implications

Malaysia's Vision for Sustainable MOOC Development and Lifelong Learning

06

Dr. Heon Joo SUH
Director of External Affairs,
National Institute for Lifelong
Education (NILE),
Republic of Korea

The progress and achievements of MOOCs and online learning in each country - Republic of Korea

- ▶ Dr. Suh presented the K-MOOC service in the Republic of Korea and its objectives, which include innovating teaching-learning methods in higher education, providing equal opportunities for access to higher education, and establishing a foundation for lifelong learning in the era of "Homo Hundred." The K-MOOC service was launched in response to the international spread of MOOCs, the shift in the paradigm of higher education, the increasing demand for workforce lifelong competency development, and the increased job mobility trend.

The K-MOOC ecosystem has six significant stakeholders, including the Ministry of Education, the National Institute for Lifelong Learning, Course Evaluation and Selection Committee, K-MOOC Operation units under NILE, MOOCs-providing institutions, and Partner organizations.

Starting in 2017, the Ministry of Education in South Korea has actively promoted the accreditation and usage of K-MOOCs. The follow-up measures include expanding the use of MOOCs and credit recognition among K-MOOC leading universities, encouraging credit recognition and exchange between K-MOOC participating universities, fostering the development and use of K-MOOCs by non-participating universities, promoting the use of K-MOOCs in in-service vocational education and training and adult lifelong education, and providing participating institutions with the best practice of credit recognition and building a credit recognition-related information system.

K-MOOC was a success with 1,424 courses and 1.1 million users, 2.7 million course registrations, and 28 million site visits as of October 2022. To ensure sustainability, Dr. Suh proposed a two-pronged strategy, which includes introducing a new degree scheme and digital badges and expanding openness and sharing of quality MOOCs. Additionally, the Korean government has played a significant role in recommending universities to introduce credit recognition for MOOCs since 2017 and revising related laws and regulations for the accreditation of MOOCs in 2019.

- ▶ The success of K-MOOC in South Korea provides valuable lessons for the ASEAN region in developing a sustainable MOOC ecosystem. The K-MOOC service has innovated teaching-learning methods in higher education, provided equal opportunities for access to higher education, and established a foundation for lifelong learning. The Korean government has actively promoted the accreditation and usage of MOOCs, and it has played a significant role in revising laws and regulations for the accreditation of MOOCs.



Implications

Republic of Korea's K-MOOC Service: A Successful Model for MOOCs in the ASEAN Region

07

Assoc. Prof. Dr. Thapanee Thammetar
Prof. Dr. Jintavee Khaisang
Director and Deputy Director,
Thailand Cyber University
Project (TCU), Ministry of
Higher Education, Science,
Research and Innovation
(MHESI) Thailand

The progress and achievements of MOOCs and online learning in Thailand

- ▶ Thai MOOC was founded in 2015 with the goal of providing educational access to all types of learners through a network of cooperation in online education, distance education management, and research and quality assurance. It aims to act as a learning management platform for universities to offer MOOCs for free, with micro-credential courses planned for the top three most studied categories: Computer and Technology, Business and Management, and Education and Training.

Thai MOOC's ecosystem includes a roaming account that allows students to log in with affiliated organizations' user accounts, an e-profile that collects learning records for lifelong learning, and a credit bank system that accumulates learning achievements for accreditation with partner agencies.

The credit bank system accumulates credits based on professional competencies gained through study, training, or work experience. Thai MOOC Academy places significant emphasis on ensuring the credibility and transferability of its certificates in collaboration with two government agencies: the Digital Government Development Agency (DGA) and the Electronic Transaction Development Agency (ETDA). The credit accumulated in the credit bank could be stored for a lifetime without limitations on the learner's qualification and time or duration of study for earning credits.

Thai MOOC also conducts MOOC exchange collaborations with overseas universities to enrich learners' knowledge and broaden their perspectives. To sustain the Thai MOOC platform and learners' enthusiasm, live broadcasts, and conferences are conducted to engage and stimulate learners' ambition.

- ▶ Thai MOOC's comprehensive ecosystem and credit bank system provide a significant contribution to online education in Thailand. The credit bank system, in particular, allows learners to accumulate credits based on professional competencies gained through study, training, or work experience, which can be stored for a lifetime and transferred to higher education institutions for accreditation. Thai MOOC's collaborations with government agencies and overseas universities also contribute to the platform's sustainability and learners' knowledge enrichment.

Implications

Thai MOOC leads the way in online education with a comprehensive ecosystem and credit bank system

08

The Analysis

The ASEAN Plus Republic of Korea and ASEAN University Network Experts' Meeting hosted by Thai MOOC brought together experts from six organizations and countries to discuss the progress and challenges of MOOCs and online learning. The meeting highlighted the common challenges faced by MOOCs in the region and the unique approaches taken by each country to address them.

Dr. Choltis Dhirathiti from AUN emphasized the importance of collaboration, consultation, and context relevance in designing and implementing qualification assessments for MOOCs. Prof. Dr. Paulina Pannen from Indonesia discussed the Indonesian Distance Education Strategy, policies and regulations, MOOC providers in the public and private sectors, and the challenges faced by MOOCs in Indonesia. Assoc. Prof. Dr. Nurbiha A Shukor from Malaysia presented the Malaysia Education Blueprint as the guiding document for MOOC development in the country and discussed the sustainability model, MOOC credit transfer policies, and other actions undertaken through MOOCs and online learning.

Prof. Dr. Melinda Dela Pena Bandalaria from the Philippines highlighted the increase in MOOC usage during the COVID-19 pandemic and presented several sustainability strategies for MOOC initiatives, including partnering with industry and tapping into Corporate Social Responsibility funds. Dr. Heon Joo Suh from Republic of Korea focused on the K-MOOC service and its ecosystem, credit recognition and usage policies, and plans to expand accreditation to private-sector courses in the next five years.

Finally, Assoc. Prof. Dr. Thapanee Thammetar and Prof. Dr. Jintavee Khlaisang from Thailand presented the Thai MOOC initiative, including its background, rationale, and ecosystem, as well as the transferable credits system and collaborations and sustainability models. They also revealed that since its launch, Thai MOOC has gained 1.57 million learners and issued 1.53 million certificates by 2022.

Overall, the meeting highlighted the progress and achievements of MOOCs and online learning in the region and the need for continued collaboration, innovation, and sustainability to ensure the success of these initiatives.

Implications

Experts from ASEAN Plus Republic of Korea Discuss Progress, Achievements, and Challenges of MOOCs and Online Learning.

Conclusion

Experts from six organizations and countries recently convened at the ASEAN Plus Republic of Korea and ASEAN University Network Experts' Meeting hosted by Thai MOOC to discuss the progress and challenges of MOOCs and online learning in the region. The meeting highlighted the common challenges faced by MOOCs and the unique approaches taken by each country to address them.

The experts emphasized the importance of collaboration, consultation, and context relevance in designing and implementing qualification assessments for MOOCs. They also presented various sustainability strategies for MOOC initiatives, including partnering with industry and tapping into Corporate Social Responsibility funds. Furthermore, they discussed the progress and achievements of MOOCs and online learning in their respective countries, such as Malaysia's Education Blueprint, the K-MOOC service in Republic of Korea, and the Thai MOOC initiative, which has gained 1.57 million learners and issued 1.53 million certificates by 2022.

The meeting highlighted the need for continued collaboration, innovation, and sustainability to ensure the success of MOOCs and online learning initiatives in the region. Thai MOOC by TCU expressed pride in hosting the event and looks forward to further collaborations with other countries in the region and around the world.

Implications

ASEAN, AUN, and Republic of Korea Experts Gathered to Empower MOOCs for Sustainable Lifelong Learning, a Bright Future of Education Ahead!

Thai MOOC by TCU hosts ASEAN Plus Republic of Korea and AUN Experts' Meeting, expresses pride and plans for future collaborations for empowering MOOCs for Sustainable Lifelong Learning, a Bright Future of Education Ahead!

The Growing Popularity of Nano-learning in National Economics University

#Nano-learning #learning-method

Pham Xuan Lam, Le Thi Hoai Thu, Tran Thi My Diep, Pham Duc Trung / NEU



A learning approach known as Nano-learning involves delivering material in quick-to-understand, small, easily digestible chunks. Nowadays, students prefer Nano-learning since it is brief, simple, and always available, which may make them less eager to participate in lengthy and complex courses or lessons. This article presents the status and prevalence of Nano-learning within our school - National Economics University in Vietnam.

01

Introduction

Nano-learning is referred to bite-sized learning (Aburizaizah & Albaiz, 2021). Based on the concepts of nanotechnology, Nano-learning uses discrete, compact, and cohesive units (Khlaif & Salha, 2021). The learner gains knowledge without spending an excessive amount of time because it is a continuous learning process. Nano-learning offers condensed learning modules with the most valuable information accessible, for instance, a two-minute conversation with a topic specialist will clarify any confusion and raise the learner's knowledge quotient. Shorter contents are much easier to remember because the human brain does not tire of long courses and interaction with the lecturer (Karlén Gramming, Ejemyr, & Thunell, 2019).

In the current days, social media platforms are showing a trend toward shorter content. With over two billion monthly users, YouTube is the most popular video-sharing website, but viewers are shifting to TikTok for even shorter, snappier, as well as more nano content. Because TikTok is a short-form, entertainment-focused SNS, its popularity has sparked an increase in interest in researching consuming habits and usage motivations (Garcia, Juanatas, & Juanatas, 2022). As a result, it offers development to the idea of Nano-learning. Since students have a short attention span, the method focuses repetitive learning, which is ideal for modern education and Generation-Z.

Recent research has acknowledged the importance and significance of Nano-learning in education. Nano-contents should be created as an introduction to any new subject area as well as repetition for the main feature of education during each class or throughout the entire learning period (AL-SHEHHI, 2022). Learners can also refer to links or videos whenever they need additional information or knowledge to support their new learning. This preference is consistent with Nano-learning principles, which contributes to nano-growing education's popularity among the younger generation.

Despite its importance, there are limited studies on using Nano-learning in higher education. There are two main factors which will be introduced in next the section: current situation of Nano-learning in Vietnam higher education (which explains why and how students use Nano-learning to support their study); and their opinion about it. Those result are surveyed students who are currently studying at National University of Economics in VietNam.

Implications

Nano-learning can be a useful tool for repetitive learning, which is ideal for modern education and Generation Z, who have shorter attention spans.

02

Nano-learning in National Economics University in Vietnam

The research team conducted a short online survey of students from a well-known economic university in Vietnam – NEU (National Economic University). The survey was conducted with 213 students, both male and female, aged from 18 to 22. The result shows the data about the use of nano learning in three aspects: (1) used tools and applied subjects; (2) Purpose, object, and method of using Nano-learning, (3) The benefit of Nano-learning. The results show that out of 213 students, 141 students (66.2%) confirmed that they have used Nano-learning applications for studying

The obtained data indicates that the tools which support nano learning method are very diverse, which can be listed as: Duolingo, Cake, Quizlet, Kahoot, Anki, Tinycards, Memorise, Elsa, Mochi, Youtube, Tiktok, Instargram, Facebook... (Students are allowed to choose many applications). The best choices are for applications such as Duolingo, Quizlet, Kahoot accounting for over 70%. This is followed by social networking applications with 59% and other applications such as Elsa and Cake, with 46% and 44% respectively. Other applications are only used by less than 1-10% students.

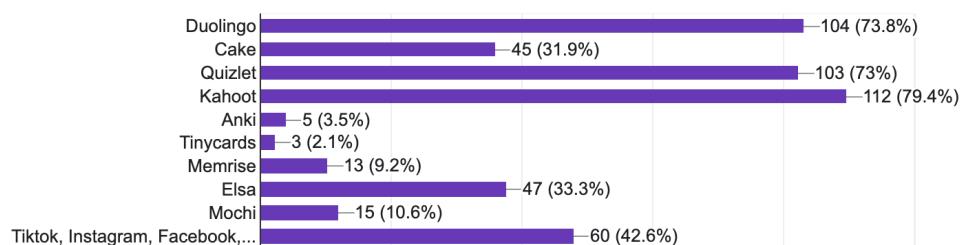


Figure 1. The popularity of Nano-learning tools

In addition, the main applied subjects are English, Math, Science, History, Art, ... and English accounts for the majority 98% of students., followed by percentage for math, science, history, and art with 35%, 29%, 27% and 19% respectively. The remaining subjects such as programming, informatics, marketing, psychology, and economics account for a very small proportion, with each of them being less than 1%.

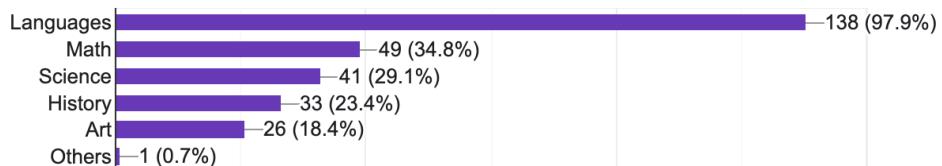


Figure 2. The subjects commonly used in Nano-learning

According to the main subjects applied being English, the purpose of improving listening and speaking skills, vocabulary, and grammar accounts for a significant proportion over 60%. Purposes related to entertainment and passive learning are high at 52%. This is followed by goals related to knowledge of the final exam at 46% and living skills at 38%. Other objects occupied negligible percentages. A vast majority of students found that nano learning method is suitable for the goal of memorizing new words and pronunciation (69%) or learning new concepts in a small field (56%). A large percentage of students choose to match the goal of learning new knowledge and skills (46%) or solving simple exercises (33%). Self-study is the dominant form of nano learning methods accounting for 91%. This method of learning is chosen by teachers with the rate of 27%. This is not a small percentage, which proves that nano learning is likely a personalized learning trend and this trend is introduced by teachers in higher education.



In addition, the collected data confirm the benefits of Nano-learning method. Specifically, 28.4% of the students affirmed that the Nano-learning method is very useful and useful. The percentage of students who made a relatively useful choice was 52.5%. However, there is a small rate of students who are uncertain about the usefulness of Nano-learning methods, accounting for about 17%. One positive thing is that the negative rate of Nano-learning methods is almost non-existent around 1%. Although the collected data is not large, this result is a clear demonstration of Nano-learning method's usefulness (see the below Figure)

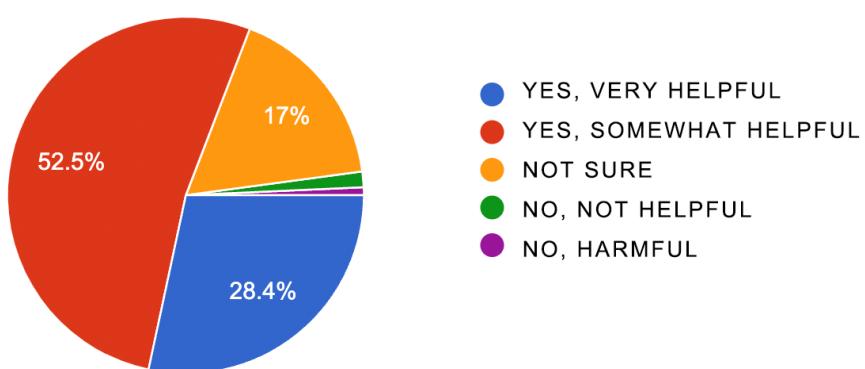


Figure 3. The usefulness of Nano-learning

Implications

Firstly, the findings indicate that Nano-learning applications have a high adoption rate among students in higher education. This suggests that educators should consider incorporating Nano-learning methods into their teaching practices to improve students' learning experiences. Secondly, the diverse range of tools used for nano learning highlights the importance of providing students with a variety of options to suit their individual learning preferences. This can include both traditional and non-traditional tools, such as social media applications. Thirdly, the dominance of English as the primary subject for nano learning suggests that educators should focus on providing more opportunities for students to improve their language skills. Additionally, the high proportion of students using Nano-learning for entertainment and passive learning purposes indicates that educators should consider incorporating gamification elements into their teaching practices to increase student engagement. Fourthly, the data on the benefits of Nano-learning, including its usefulness for memorizing new words and learning new concepts, further supports the adoption of Nano-learning methods in higher education.

03

Student's perspective of Nano-learning

The first part of this study showed that students knew quite well about Nano-learning application tools. They used these apps for various purposes such as self-studying English or improving soft skills. In the second part of our study, we investigated students' perceptions of the effectiveness and appropriateness of Nano-learning applications that students used.

There are 3 aspects of the benefits that apps bring to students in learning considered in our research. Include:

- Time saving (compared to traditional learning).
- Better concentration/focus and access to knowledge.
- The convenience and flexibility of using Nano-learning applications.

Respondents will rate their Nano-learning app based on a scale of 6 levels, including: "Very helpful", "Relatively helpful", "Not sure", "Not helpful", "Easy to waste time" and "Harmful".

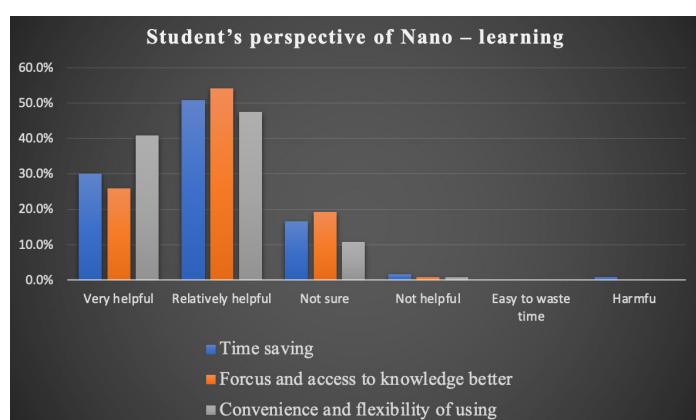


Figure 4.
Student's Perspective of
Nano-learning

According to findings, most students know the advantages of Nano-learning applications and consider them useful. Most students surveyed said that apps help save learning time compared to traditional learning methods. (30% "very helpful" and 50.8% "Relatively helpful"). 40.8% of the students surveyed think that these apps are convenient and flexible to use and 47.5% find them "Relatively helpful". It is quite a high rate within the appropriate percentage of 50,8 respondents who think that Nano-learning applications help them focus and access knowledge better. In addition, one-sixth of the respondents found it especially useful. Meanwhile, the respondents who disagree with benefits of Nano-learning apps (within all 3 aspects) only account for an extremely low percentage (~1%).

The findings also show that more than 83% of students give positive feedback about continuing to use Nano-learning applications to support their learning process. However, the remaining 17% of students are not sure or think they will continue to use these applications.

From this survey's results, it can be concluded that most students have a positive assessment of the usefulness of Nano-learning applications and are willing to continue using them to improve their learning efficiency.

Implications

The study highlights that students perceive these applications as timesaving, convenient, flexible, and helpful in improving their focus and accessing knowledge. This suggests that the use of Nano-learning applications can be an effective supplement to traditional learning methods. Additionally, the study shows that most students have a positive perception of Nano-learning applications and are willing to continue using them to support their learning process. Therefore, it can be suggested that educational institutions can integrate Nano-learning applications into their teaching methods to enhance students' learning experiences and increase their engagement.

04

Summary

In conclusion, Nano-learning has gained popularity in modern education due to its easily digestible and brief approach. This article presents a study conducted among students at National Economics University in Vietnam, aimed at understanding the status and prevalence of Nano-learning. The study shows that a significant number of students (66.2%) have used Nano-learning applications for studying, with English being the most studied subject. The results also indicate that Nano-learning is perceived as suitable for repetitive learning, memorizing new words and concepts, and solving simple exercises. Self-study is the dominant form of Nano-learning, with teachers also introducing this trend in higher education. The study underscores the importance of integrating Nano-learning in higher education to cater to the needs of modern students and provide personalized learning opportunities.

Implications

As technology continues to shape the way we learn, we must adapt and incorporate innovative teaching methods to ensure that students are receiving the best possible education. The use of Nano-learning is one such method that can help to achieve this goal.

References

- Aburizaizah, S. J., & Albaiz, T. A. (2021). Review of the Use and Impact of Nano-learning in Education. Paper presented at the 4th International Conference on Research in Education.
- AL-SHEHHI, M. (2022). The use of Technology in Education: A Study About the Impact of Using Nano-learning in Teaching English as A Foreign Language in Higher Education Institutions in the United Arab Emirates. The British University in Dubai (BUID),
- Garcia, M. B., Juanatas, I. C., & Juanatas, R. A. (2022). TikTok as a Knowledge Source for Programming Learners: a New Form of Nanolearning? Paper presented at the 2022 10th International Conference on Information and Education Technology (ICIET).
- Karlén Gramming, A.-C., Ejemyr, E., & Thunell, E. (2019). Implementing Nano-learning in the Law Firm. Legal Information Management, 19(4), 241-246. doi:10.1017/S1472669619000562
- Khlaif, Z. N., & Salha, S. (2021). Using TikTok in Education: A Form of Micro-learning or Nano-learning? Interdisciplinary Journal of Virtual Learning in Medical Sciences, 12(3), 213-218. doi:10.30476/ijvlms.2021.90211.1087