ENTERING THE FUTURE AMIDST PERSISTENT GAPS

5 of 11

SEA countries had lower than global average percentage of individuals using the internet in 2021

Majority connect via mobile, highlighting potential inability to afford otherwise

9 of 11

countries in SEA was below the global GDP per capita of USD 12.2k in 2021, showcasing a huge wealth gap

In 2011 – 2021, GDP per capita growth in most SEA countries remain insignificant, showcasing persistent wealth gap

Source: World Bank & Statista

Source: World Bank & Statista

How Educators in Southeast Asia can Cope with Digitalisation in the Absence of Stable Digital Access

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Much of Southeast Asia have always been filled with stark contrasts. Extremely wealthy urban areas sitting next to slums. Well-developed regions close to under-developed ones. More recently, areas with stable digital access and areas without.

This last point is vital in terms of education. As the digital wave crashes with might, in particularly during the covid-19 lockdowns, educators in marginalized areas simply cannot cope. Stable internet access remains a challenge for many Southeast Asians. According to World Bank Data, five out of eleven Southeast Asian countries have lower than the global average percentage of individuals using the internet in 2021, which was at mere 63 percent. Those with internet also tend to access via mobile, meaning there is a change that is the only method many can afford.

This is not surprising, given the region's continuing low GDP per capita. With the exception of Singapore and Brunei, other Southeast Asian countries have GDP per capita lower than the global average. Plotted over a decade from 2011, Singapore is the only country with significant growth in GDP per capita, with approximately a USD 19k increase. Most others remain flat with less than USD 1,000 increase, showcasing the region's persistent wealth gap.

Everyone knows that digital skills are needed going into the future, but how does one walk without legs? If people cannot access digital tools, it is practically impossible to conduct digital learning. Furthermore, the solution is no less complicated, as internet access

provision is generally outside the realm of the ministry of education. Digital access is an education issue that requires cross-sectoral solutions, a huge effort in many developing countries.

DIGITAL ACCESS IS AN EDUCATION ISSUE THAT REQUIRES CROSS-SECTORAL SOLUTIONS, A HUGE EFFORT IN MANY DEVELOPING COUNTRIES

It is essential, therefore, to inquire about how educators can cope. Indeed, while digital learning remains crucial going into the future, another vital approach with less of a spotlight is problem-based learning.

Like Southeast Asia, the world is also filled with dualities. On one hand is impressive technological developments, such as ChatGPT. On the other are crises that some might argue could have been eradicated years ago, such as hunger and stark wealth gap.

Problem-based learning invites students to make sense of the patterns in their surroundings. It invites students to identify the issues around them and ask the right questions in order to generate effective solutions. Teachers would switch their classrooms from one-way instruction to two-way conversations. Teachers would be challenged to logically curate students' ideas and guide them to the answers they seek. It is a form of learning that stimulates creativity and problem-solving, skills often cited as essential going into the future, for both students and teachers. Perhaps most importantly, despite its vitality, problem-based learning does not necessitate digital access.

PERHAPS MOST IMPORTANTLY, DESPITE ITS VITALITY, PROBLEM-BASED LEARNING DOES NOT NECESSITATE DIGITAL ACCESS

This is not to say that all education systems in Southeast Asia should set technology aside. Digital skills remain crucial. As Industry 4.0 approaches and various organizations go through digital transformations, a lot more jobs will necessitate a certain amount of digital knowledge. As technological developments become more rapid, digital skills would also enable one to adapt more easily. It enables one to access more information and potentially sharpen critical thinking.

That being said, as many programmers would say, programming is truly about problem-solving. The very essence of programming is to build solutions, and the process of programming itself requires a good amount of fixing errors. Consider ChatGPT. While it is tremendously helpful for a lot of things, it still requires effective prompts in order to generate the best responses. One way to come up with these effective prompts is to google them. Thus, a problem-solving process occurs.

The point here is that, while digital skills are an essential tool, problem-solving skills remain the heart of what is vital going into the future. If we go back a few decades to when some of the most successful Southeast Asians today began as entrepreneurs, many of the stories did not begin with them having a comfortable grasp of accounting. Instead, they had what was vital in starting and growing a business, perseverance. Accounting, like digital skills, was the essential tool to running a business, but at the heart of its success is the entrepreneur's ability to keep going despite failures.

THE POINT HERE IS THAT, WHILE DIGITAL SKILLS ARE AN ESSENTIAL TOOL, PROBLEM-SOLVING SKILLS REMAIN THE HEART OF WHAT IS VITAL GOING ON INTO THE FUTURE

The future generation needs to know that the absence of digital access is not the end of the world. While digital skills remain important, at the core of future skills is problem-solving. Educators and education stakeholders in Southeast Asia must therefore be aware of the presence of problem-based learning. It is the approach that can enable the future for the future generation.

Inspiring Sustainable Education Through SEPS Integration

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Wat Koh Wang Sai School, located in Nakhon Pathom province, Thailand, has emerged as a beacon of sustainable education by integrating the principles of Sufficiency Economy Philosophy (SEP) into its curriculum, learning environment, school management, and activities. This holistic approach, which it started in 2008, empowers students with knowledge and values that promote sustainability, creating a lasting impact on their lives and the community, and providing solutions to issues in their surroundings.

The school, with about 800 students as of June 2023 and with 54 teachers and other education personnel, has received numerous citations from various agencies such as the Ministry of Agriculture and Cooperatives, Ministry of Education, Princess Maha Chakri Award, among others as a model school for community sufficiency economy learning center.

Hence, this school was a perfect choice for benchmarking of SEP practices during the first Extraordinary Governing Board Meeting of the SEAMEO Regional Centre for Sufficiency Economy Philosophy for Sustainability (SEAMEO SEPS) on 8-10 June 2023 held at RXV Wellness Village, Sampran, Nakhon Pathom. The meeting venue, formerly called Suan Sampran or "Rose Garden" provided a perfect backdrop for the Meeting - thanks to Arus Nawarach, third generation heir to the property. He transformed the hotel into a center of organic produce and ecotourism creating an entire value chain based on sustainability.

The tour around the school was conducted by no less than the Senior Advisor for Sufficiency Economy Philosophy and Sustainable Development

Centre, National Institute of Development Administration (NIDA), Bangkok Dr. Priyanut Dharmapiya. With a slung on her shoulder, Dr. Priyanut walked the GB Members around the school area where the students were engaged in their different SEP activities - growing vegetables, raising goats, hogs, chickens and feeding fish, among others. She also encouraged the participants to partake of the organic snacks prepared by students using their developed recipes.

By nurturing environmentally conscious students and promoting sustainable practices, the school creates a positive impact on the local community and serves as a model for sustainable education. Wat Koh Wang Sai School's commitment to SEP integration paves the way for a brighter, more sustainable future, where education acts as a catalyst for positive change and empowers students to become responsible global citizens.

SEAMEO SEPS is aiming to increase the number of schools that are integrating the SEP principles into their curriculum, learning environment and school activities as well as school management. Inspired by his Majesty King Bhumibol Adulyadej The Great also known as King Rama IX, SEP is a homegrown concept that has caught the fire among individuals, groups and organizations that are passionate about living sustainably in a world that is full of contrasts. SEAMEO shares in this passion and vision and will continue to soldier on to do its part in securing for the people of Southeast an improved quality of life through cooperation and collaboration in education, science and culture.
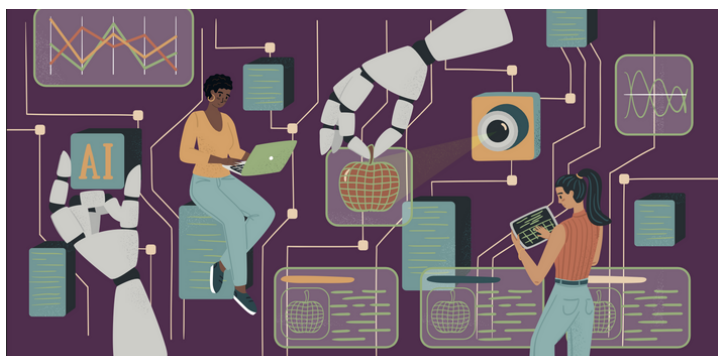
Embracing the Challenge: Navigating the Use of AI in Education

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Imagine a society where every individual is an executive equipped with a team of efficient and responsive personal assistants. With the help of artificial intelligence (AI) tools such as ChatGPT and Midjourney, these assistants can produce exceptional visuals, write professional letters, and even create original songs and graphics in any style. While this may seem like a far-fetched idea, advances in AI technology have brought us closer to making this vision a reality. However, ensuring that everyone possesses a thorough knowledge of how to use these tools to achieve their goals will be crucial. This will require a fundamental shift in how we educate our children to prepare them for the new working paradigm.

Artificial intelligence has far-reaching applications beyond the tasks mentioned above. In the field of education, AI has the potential to revolutionise how we learn and develop our talents. Many companies are currently working on AI solutions that can customise learning materials to meet individual needs, provide learning approaches that match individual learning styles, and adapt to different backgrounds and current levels of development. These personalised learning systems aim to make learning more effective and efficient, ultimately transforming education as we know it.

The education sector has access to a wide range of AI tools that aid with administrative tasks, enhance student engagement and achievement, monitor student progress, and analyse learning disabilities to provide targeted solutions. This article will focus solely on the use of generative AI tools, particularly ChatGPT from OpenAI, in education.

The **zeroth principle** is to prepare students to work alongside machines, rather than like machines. This principle is labeled the "zeroth" because without it the rest of the principles would be useless. The main idea is that we already have access to a powerful tool; instead of competing with it, we should learn to use it effectively.

The first principle is not to trust everything ChatGPT says. ChatGPT is based on a generative AI algorithm that can create seemingly new and realistic content. However, the underlying engine uses statistical models to generate new data from a training dataset. According to the garbage-in, garbage-out principle, the output produced by ChatGPT depends on the data it was trained with. Obviously, it is crucial to verify the accuracy and reliability of the information generated by ChatGPT before accepting it as valid.

General Guidance

After ChatGPT's release for general usage in November 2022, the education community has shown immense enthusiasm about its potential to revolutionise the learning process and disrupt the status quo in education. However, the question of whether to allow its usage in lessons, student homework and assignments has sparked heated discussion. While proponents fully support its use, they also warn about the potential for abuse by students. Educators are being presented with a variety of guidelines and arguments on how to adopt ChatGPT in the learning process, which revolve around three crucial principles:

THE 0TH PRINCIPLE
Prepare students to work alongside machines, not to work like machines.

THE 1ST PRINCIPLE
Don't trust everything it says. Progressively question its answers and explore deeper.

THE 2ND PRINCIPLE
Learn how it works and understand its limitations.

Key Principles for Adopting ChatGPT in Learning

During my personal use of ChatGPT, I asked it to provide me with a chord progression for the famous song Fly Me to the Moon. It generated a set of chords that appeared to be appropriate and matched it with completely accurate lyrics. However, all the chords generated were major chords. As a musician, I knew that this set of chord

progressions was wrong without even trying them on a musical instrument. Interestingly, in addition to the chords and lyrics the answer also included a paragraph of information about the song's composer and how it was composed. Nevertheless, although the presentation style of ChatGPT's answer was convincing, the answer to the main question was entirely incorrect.

One positive aspect of ChatGPT is that its knowledge keeps evolving with the information provided by users. When I asked the same question again a month later, ChatGPT was able to produce the correct answer. Furthermore, I was able to request a customised chord progression for a different music genre. I specified that I wanted a jazz flavour, and ChatGPT generated a chord progression with various chord tones that matched different jazz styles.

The previous example highlights the importance of the *second principle* – learning how ChatGPT works and understanding its limitations. Whenever a tool is used, it is crucial to have a basic understanding of how it functions. While one doesn't need to learn coding and create one's own generative AI, a general understanding of how the technology operates can help in identifying what input is needed and what output should be expected.

It is important to understand ChatGPT's limitations. Its responses are based on the data set it was trained on, which means that it may not provide a valid response to a new or unfamiliar topic. In such cases, it may provide an answer that seems believable but is not accurate. For instance, when asked about Industry 5.0, ChatGPT responded with a set of well-crafted and seemingly knowledgeable answers that were all about Industry 4.0, without realising that we were still in Industry 4.0. Therefore, it is essential to understand the tool's limitations in order to know what to expect from it.

By keeping these three principles in mind, ChatGPT can be an invaluable tool in various fields, particularly in education.

The Future of AI in Education

While ChatGPT has tremendous capability to transfrom education and the way we develop our skills. One fundamental issue remains - that of the equity and equality of education. There are those who have access to the tool, and those who do not. The digital divide we have already experienced will only become more pronounced with the looming problem of the AI divide. Although the GPT engine was created by a group of open - source supporters, its engine can be used to build more advanced commercial products. In addition

to the free version that is available for anyone to use, ChatGPT also has a more powerful fee-based version, whereby those who can afford to pay the subscription fee will have access to better services than those who cannot. Governments, universities and schools must take this problem into consideration and set up policies or support to narrow this divide.

ChatGPT is not the only application that uses generative AI as its engine; other applications are available that have been customised to fit specific tasks and flavours. One of the most interesting features of AI applications is their ability to link and integrate with other applications. ChatGPT has been linked to a flight booking engine, so that it can access real-time information on available flights. Other information sources have also been planned to link with ChatGPT to allow users to query information via the ChatGPT interface. Users will be able to conduct business, do online shopping and perform other tasks using a conversation style similar to talking with actual people instead of interacting with website interfaces.

In the realm of education too, the GPT engine has immense capabilities when used with existing and widely-used applications. For instance, Khan Academy has implemented its Khanmigo by embedding the newest GPT engine into Khan Academy's tutorial tools. The AI-enabled Khan tutoring system can interact with its learners like a live tutor. The AI can help to guide students according to misunderstandings that the AI can detect, and can work out the details until the student has a clear understanding of the subject.

The age of artificial intelligence is here now, and technologies are becoming more powerful every day. They promise to have a vast and increasing impact on our daily lives. What we need to do is to learn how to make use of such technologies effectively and efficiently. This means we will need to rethink the process we use to develop human capabilities and skills.

> *A key issue that we will need to explore in research and policy-making is ensuring that we can live creatively alongside powerful intelligent machines.*

AI may not be able to replace human beings entirely, but it has demonstrated that there are many things that it can do better than human beings. The education world has been discussing lifelong learning recently to help people remain relevant in the context of all the forthcoming changes in the VUCA world. A key issue that we will need to explore in research and policy-making is ensuring that we can live creatively alongside powerful intelligent machines.

SEA-PLM 2024 Sustains Momentum Through the Success of the 2023 Field Trial Assessment

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Over 3,000 students from 79 sample schools in Lao PDR, the Philippines, and Vietnam took part in the highly anticipated SEA-PLM Field Trial assessment. This important milestone with a focus on reading and mathematics domains, signifies a momentous step forward for SEA-PLM 2024. One of the key factors contributing to the success of the SEA-PLM Field Trial was the active involvement of parents, who provided their valuable insights through the completion of contextual parent questionnaires. This comprehensive approach allowed for a more holistic understanding of the learning environment and other factors affecting student learning.

The smooth execution of the testing operations was made possible through the efforts of nominated teachers and school principals from the selected schools. These edu-cators undertook the roles of test administrators and school coordinators, undergoing rigorous training conducted by the SEA-PLM National teams. The training equipped them with a deeper understanding of the regional standards and protocols, ensuring strict adherence throughout the Field Trials.

To ensure the integrity and compliance of the field trial activities, a host of observers and quality monitors were deployed in schools. These monitors included members of the SEA-PLM National Teams, representatives from the Ministries of Education, as well as provincial and district counterparts. Additionally, delegates from the SEA-PLM Secretariat, SEAMEO Secretariat, and UNICEF EAPRO provided their expertise and guidance, guaranteeing strict compliance with regional technical standards.

The successful conduct of the Field Trials by the first batch of country teams represents the culmination of their unwavering commitment and collaborative efforts during the preparatory phase.

This achievement sets a promising precedent for the second cycle of the SEA-PLM program and lays the groundwork for the upcoming Main Survey in 2024. The invaluable experiences and lessons learned from the Field Trials will inform the program's progress as it prepares for the participation of the second batch of countries later this year.

SEA-PLM remains committed to fostering regional cooperation in Southeast Asia through improving the quality of education for all children in the region.

Representatives from Viengchan Province, Lao PDR

ABOUT SEA-PLM

The Southeast Asia Primary Learning Metrics (SEA- PLM) is a regional assessment and capacity building programme designed by and for Southeast Asian countries to improve relevant and equitable learning outcomes for students in basic education.

SEA-PLM supportss member countries in developing robust learning assessment systems and monitoring student learning outcomes for equitable and meaningful education for all children across the region.

VP and Education Secretary of the Philippines visits Brunei Darussalam and Singapore as SEAMEO Council President

Vice President and Education Secretary Sara Duterte, in her role as the president of SEAMEO, undertook official visits to Brunei Darussalam and Singapore. In Brunei, she interacted with students and educators at Sekolah Rendah Pusar Ulak, gaining insights into innovative programs on school reading, collaborative mathematics learning, and AI Quran/Jawi reading. She also visited SEAMEO Regional Centre on Vocational and Technical Education, witnessing the signing of significant partnerships with Universiti Brunei Darussalam and Philippine Normal University to enhance TVET efforts.

Additionally, VP Duterte visited Seri Mulia Sarjana International School, where she explored their Digital Learning Unit Exhibition, showcasing advanced tools like 3D printing, virtual reality, and augmented reality, highlighting the importance of adapting education to the digital era.

In Brunei, she engaged in a meaningful discussion with Dr Shamsiah Zuraini Kanchanawati binti Haji Tajuddin, emphasizing the pivotal role of partnerships and knowledge exchange in addressing education challenges in Southeast Asian countries, particularly in relation to COVID-19 learning recovery.

During her visit to Singapore, VP Duterte met with the Second Minister for Education and Foreign Affairs to discuss strengthening cooperation in quality education, including special education. She acknowledged the educational challenges posed by the COVID-19 pandemic.

VP Duterte also visited the SEAMEO Regional Language Centre (RELC) in Singapore, where she received a briefing on the scholarship programs and projects. She expressed her support for the RELC's initiatives, aiming to provide more opportunities for individuals to learn and upskill themselves.

Teacher e-Training on Inquiry-Based Learning and Mathematical Thinking

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CRICED - the Center for Research on International Cooperation in Educational Development of the University of Tsukuba, has worked with SEAMEO Secretariat to organize the SEAMEO-University of Tsukuba Teacher E-training Series. The training is open to teachers and educators in Southeast Asia and beyond free of charge from distinguished professors and experts around the world.

This year, the training brought up two topics. First is educational practices to promote inquiry-based learning using IB teaching methods. Second is mathematical thinking and problem solving for lower and upper primary levels as well as lower secondary.

Fit for Industry 4.0

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Introducing the Learning Highlights series by SEAMEO VOCTECH! Stay ahead of the rapidly evolving world of work with our standalone learning units extracted from the "Fit for Industry 4.0" training modules for TVET professionals. These efficient and engaging units are designed for self-paced learning, offering anytime, anywhere access.

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