



Digital Transformation in Education: Addressing Challenges Across ASEAN

EXECUTIVE SUMMARY

- The digital revolution has called into question the concept of the traditional classroom and the approaches used to develop students' learning experiences.
- The digital transformation in education was further sped up by the COVID-19 pandemic. Online learning was prevalent during the pandemic since no other option was available; educators and students alike must adapt to the new normal.
- Findings from Cambodia and Singapore demonstrate two main challenges to the digital transformation in education across ASEAN nations — digital divide and pedagogy principles.
- It is in the best interest of ASEAN member states to take advantage of the heightened momentum of the digital transformation during the pandemic, foster innovation across the education sector, and make blended learning the new standard of education.

By Long Sovitou

Introduction

Digital transformation is a global trend. The digital revolution has brought an unprecedented level of connectivity, radically changing the way people live, work, interact with others, and perceive the world around them. Analogously, the internet penetration rate in Southeast Asian countries has increased rapidly with over 400 million internet users.ⁱ

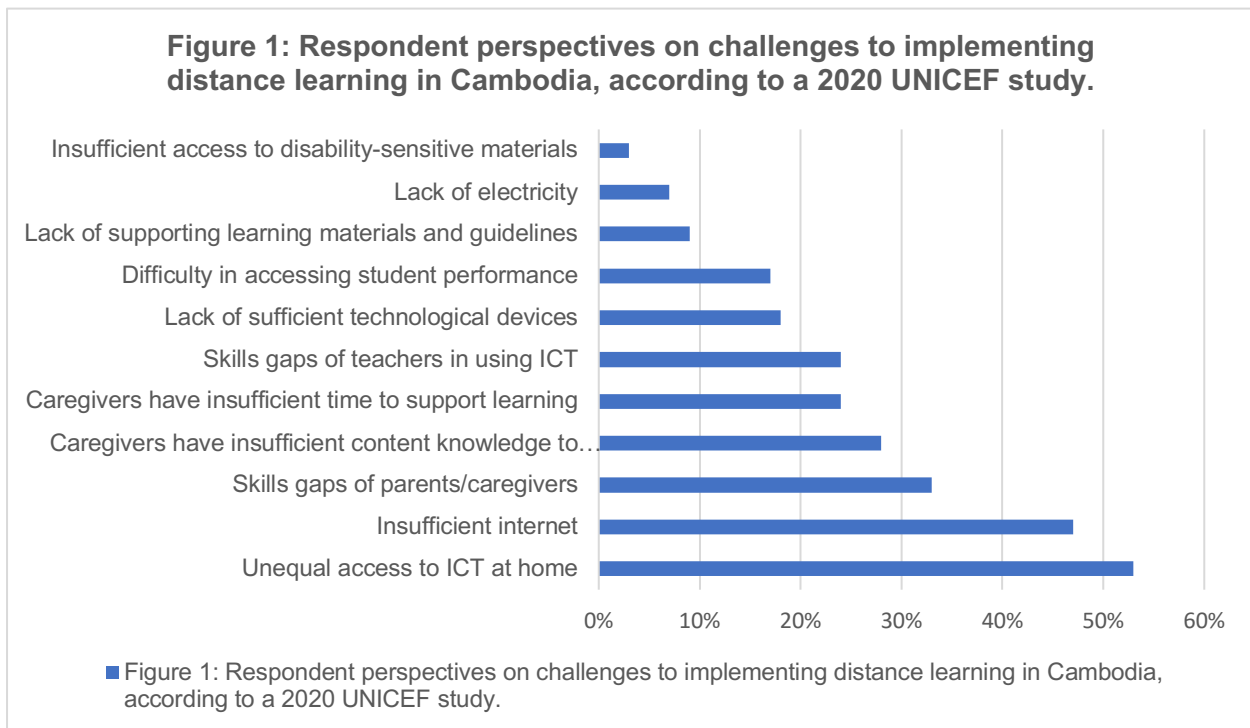
In this regard, it is not surprising that these digital transformation trends have had a substantial impact on the education system across the region. The digital shift has challenged the idea of conventional classroom and the methodologies in designing students' learning experiences. This transformation was further accelerated by the COVID-19 pandemic, which forced the closure of schools in various nations. Teachers and students alike have switched to home-based learning to continue their education. Despite the swift efforts to sustain the digital transformation in education, various challenges are still yet to be overcome.

Challenges

ASEAN stated that the COVID-19 pandemic has affected the quality of education for over 152 million students across the region.ⁱⁱ Not all ASEAN member states have responded to this issue uniformly, as each country encountered different challenges and difficulties.

The challenge of digital divide is more prevalent than ever before during the pandemic. Students, especially of young age, must get accustomed to the new routines which involve the usage of internet-enabled devices. For instance, Singaporeans had a fair share of difficulty in the rapid change to virtual learning.ⁱⁱⁱ The home-based learning experience was inconsistent among students because of the differences in their economic status. Even though nearly 90 percent of Singapore's population has access to the Internet, some households do not have access to a stable broadband internet connection. Families from disadvantaged backgrounds lacked internet-enabled computers for their children to share. It is noteworthy to mention that Singapore's Ministry of Education had devised a strategy to address the digital divide. By the end of 2021, all secondary school students would have received a personal learning device.^{iv} Considering the region's present huge economic setbacks, this is a positive development that other ASEAN member states should take note.

On a similar note, Cambodia has also encountered the issue of widening digital gap between the urban and rural students and the inclusivity of digital transformation in the context of COVID-19. According to a 2020 UNICEF report that interviewed 15,000 respondents comprising students, education administrators, and local authorities, the digital divide of inadequate access to ICT (information and communication technology) devices and internet service disproportionately affects female students and students from rural areas.^v 58 percent of the respondents had access to electricity, 32 percent to the internet, and 23 percent to a computer or tablet, according to the survey. These findings indicated a limited digital infrastructure in Cambodia that hindered the implementation of home-based learning, from insufficient internet access to lack of ICT devices. The pandemic has presented a real eye-opening experience of the digital divide that exists in the education space across the region; therefore, more comprehensive policies are required to tackle this issue.



Online education was widely practiced during the pandemic since no other option was available; educators and students alike must adapt to the new normal. This does not imply that it is an optimal or sustainable solution for all students in the long run.^{vi} In other words, ensuring that all students have access to the internet and equipping them with computers is insufficient. Access to technology does not provide the full story; educators should also analyze the quality of learners' participation. This is often determined by the competence of teachers.^{vii} Some teachers were able to utilize various technological tools to support their lesson design; others struggled to competently adjust to new tools. On a related note, while some students may have improved their independent learning habits, some struggled with their own learning pace. To envision a digital future of online learning, one must also think from a pedagogical perspective.^{viii} How can we redesign the learning experience around the technological tools at our disposal to enrich students' learning? After all, the digital transformation of education is not merely replicating the traditional classroom practices in a virtual space.

To fast-track Cambodia's immediate switch to distance learning, the Ministry of Education, Youth and Sport, in collaboration with private companies, launched a new e-learning initiative by providing prerecorded lessons through the Ministry's Facebook page, YouTube channel, and e-learning website.^{ix} Fast forward to 2021, The ministry continued to build on this momentum by launching the E-Learning mobile application which provides support for students' self-studying from grade one to twelve.^x Despite the relative success of over 100,000 registered students in just one week, it is difficult to determine the extent of the application's benefits towards students' learning from home. While some families could work from home,

frontline workers and those working in the service industry did not have the luxury of staying at home and support their children in adjusting to the new normal of learning. This demonstrates the pivotal role that parents play in their children's home-based learning, and how this may affect the effectiveness of a content-based online learning application.^{xi} Simply prioritizing technology deployment over the quality of user experience is inadequate. In addition, adopting the wrong metrics may also be a hurdle to a genuine assessment of the project.^{xii} As such, an online learning app is only as effective as the learners' capacity to develop an independent learning attitude — how they monitor their own learning and use online tools to further enhance learning at their own pace.

Policy Recommendations

The digital transformation in the education sector is certain; it can greatly enhance and facilitate students' learning beyond the difficult times of emergencies, such as the COVID-19 pandemic. The following are some recommendations to overcome the challenges of access to technology and ways of teaching practices.

- **Take advantage of the heightened momentum of digital transformation during the pandemic:** the swift adaptation to the new normal of learning during COVID-19 paved the way for ASEAN member states to make gradual, yet purpose-driven progress in tackling the digital gap and widening access to education for underprivileged groups. The availability of internet-enabled devices, internet connection, and infrastructure all play a role in ensuring that students have opportunities to learn outside of the classroom. To further deepen the digital transformation in education while also addressing the

existing socioeconomic issues that hinder universal access to education, ASEAN governments should foster cross-sector collaborations, promote multilateral collaboration among ASEAN member states and external partners, and encourage public-private partnerships. Therefore, digital transformation must remain a top priority in the agenda of the ASEAN Socio-Cultural Community to achieve access to education for all.

- **Cultivate a culture of innovation in the education sector:** Teachers, school leaders, and parents all play vital roles and have the capacity to push boundaries and think outside the box. To nurture students into lifelong learners who can quickly adapt to future trends, lesson design should be centered on students' motivation, engagement, transferable skills, and thinking processes. Developing an effective and resilient education system means investing in teachers' trainings and their readiness in adopting new technologies. Governments across ASEAN should continue to support and recognize innovative teaching practices and create conditions where educators can freely collaborate with experts and their colleagues to develop fresh approaches to meeting students' learning needs.
- **Make blended learning the new normal:** Blended learning allows for flexibility regarding access, which is critical in the context of COVID-19 and must be accepted as the new standard in education. To achieve this, educators must understand which delivery medium is optimal for each part of the lesson. Emerging technologies, such as artificial intelligence can assist teachers in assessing students' ability and creating

personalized learning plans according to their specific needs.^{xiii} In addition to face-to-face lessons, ICT tools and digital content can promote deep learning and enable students to take charge of their own independent learning.

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ⁱⁱⁱ Grace Sihombing and Haslinda Amin, “Singapore Plans to Move School Lessons Online During Covid Period - Bloomberg,” accessed October 3, 2022, <https://www.bloomberg.com/news/articles/2022-03-16/singapore-s-chan-sees-more-online-school-learning-in-covid-shift?leadSource=uverify%20wall>.

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^v UNICEF, “Needs Assessment Helps to Understand the Impact of COVID-19 on Education Stakeholders,” accessed October 3, 2022, <https://www.unicef.org/cambodia/reports/needs-assessment-helps-understand-impact-covid-19-education-stakeholders>.

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^{xii} Didier Bonnet, “3 Stages of a Successful Digital Transformation,” accessed October 3, 2022, <https://hbr.org/2022/09/3-stages-of-a-successful-digital-transformation>.

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