

EDUCATION

# Education disrupted

Technology has played a big role in supporting the continuation of teaching and learning during the recent lockdowns. It is also changing what and how we learn.

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the height of the Covid-19 pandemic earlier this year, governments around the world temporarily closed educational institutions to stem the spread of the coronavirus.

The World Economic Forum (WEF) reported that this affected more than 1.2 billion children in 186 countries. As of July 21, school closures around the world (with 107 countries adopting country-wide closures) are affecting 1.06 billion learners or about 60% of the total enrolled learners, according to the United Nations Educational, Scientific and Cultural Organisation (Unesco).

In Malaysia, the closure of schools and universities during the Movement Control Order (MCO) period, which began from March 18, affected 4.9 million in schools and 1.2 million in higher education institutions. (Secondary schools reopened

of Communications and Multimedia to roll out Kelas@Rumah, which was aired for two hours daily on RTM's TV Okey channel. Schedules were updated on the MoE website and were seen to especially benefit those who were unable to stream the ministry's online education service, EduwebTV.

The migration of teaching and learning online also offered opportunities for start-ups such as WahEasy.com, which saw an 81% increase in traffic to its online teaching and learning platform in March. The platform also expanded its services to online classes in mid-April to meet the demand (previously it offered video classes), says co-founder Kevin Ang.

In the private education sector, some schools made the transition from physical to virtual classrooms fairly easily. Taylor's Schools president BK Gan says,



**Sunway University is using VR technologies to develop collaborative teaching spaces and student-centred learning opportunities**

Schools, which means that we enhance learning through digital devices. For example, a lesson on geology often utilises various apps on iPad to look at models in 3D or to travel virtually to the Himalayas to look in-depth at various rock formations," he explains.

**Technology key to e-learning**

Sunway University's use of cloud platforms paved the way for a seamless transition to online learning. "Our cloud-based learning management system allows students to access learning materials, interact with lecturers and carry out assess-

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LAU

on June 24 for students taking major examinations this year while the other students returned to school in stages on July 15 and July 22.)

To keep lessons going, e-learning became the buzzword. The ways teachers adapted to online teaching varied, from web-based video conferencing tools such as Zoom, Microsoft Teams, Google Classroom and Google Hangouts to WhatsApp and Telegram.

In April, the Ministry of Education (MoE) collaborated with the Ministry

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He adds that the schools under the group — Garden International School, Nexus International School Singapore, Nexus International School Malaysia, Australian International School Malaysia, Taylor's International School Kuala Lumpur and Taylor's International School Puchong — are also digitally focused.

“Of these, three are Apple Distinguished

MOHD IZWAN MOHD NAZAM/THE EDGE







## Connecting teachers to students

### How WahEasy.com is disrupting traditional tuition centres via its online learning platform.

“What if you are a Penangite anxious to master the next science chapter? At 5pm, you whip out your phone and learn from one of the top tutors in Sarawak. There are no traffic jams and no time wasted commuting. You can even play back the session an unlimited number of times if you need more revision or need to refer to something. Most importantly, the tutor’s teaching style suits you. She communicates in your native language and explains complex concepts to help you understand better.” That, says WahEasy.com co-founder Kevin Ang, encapsulates the uniqueness of the online learning platform.

Launched in 2019, the platform initially set out to empower more tutors. “We realised that most teachers are not great marketers and most of them struggle to market their classes online. They also have no avenue to monetise their work such as video classes and teaching materials,” he says.

Unlike the traditional tuition centre or even other online learning services, WahEasy.com exists as a marketplace to connect teachers to students nationwide (much like the global online teaching and learning marketplace Udemy). The platform, Ang stresses, does not control the teaching style, ideas or curriculum of the tutors.

“Different teaching styles, formats and methods work for different students from different backgrounds. We see the platform as one that lets parents discover classes, content and services, which we feel are superior to what is currently available.

“For example, what book would you buy to practise essay writing? There is no way for you to get personalised feedback and comments from revision books, nothing that allows you to practise at your own pace. But some tutors provide these services on our site.

“It is like a subscription package where you can purchase an essay practice package and start writing essays. Then, you submit these

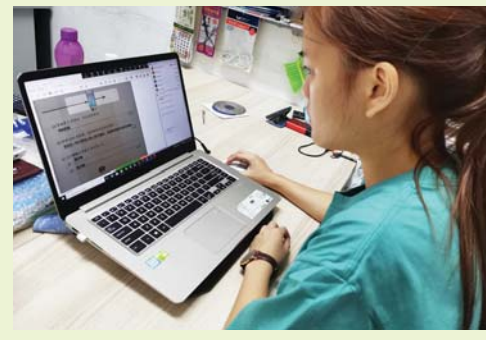
and get them back in a couple of days with comments, feedback and suggestions to help you improve. This, we feel, is a much better way to practise than just referring to answer schemes,” he says.

Classes and content cost anywhere from RM20 to RM300, with the portal taking a small cut. Some students are using the platform, which focuses on primary and secondary education needs, as a replacement for traditional tuition, says Ang. The portal currently has 3,000 students using the services of its tutors.

The platform has 30 teachers on board, whose ages range from 25 to 50. All teachers on the site are vetted for their qualifications. “We offer a 100% satisfaction guarantee for all our classes. So, if after the first class, the student thinks it is not suitable or not good enough, he can request for a full refund. We also have an open review system for them to leave their reviews,” says Ang.

Going forward, the platform plans to improve its user experience and continue to add value to its offerings. “We will continue to provide students with more free exercises, materials and data on their performance, which over time will be used to help them make more informed decisions and learn more efficiently. We plan to achieve all this sustainably, but it will be introduced in phases,” he says.

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**A class at Nexus International School Singapore**

ments. Apart from the IT infrastructure, we have a task force focusing on strategies for technology-enhanced learning,” says Associate Professor Dr Lau Sian Lun, associate dean and head of the Department of Computing & Information Systems.

“The university has established good communication with all students through online announcements, the student portal and learning management systems so that students were kept up to date with the latest developments and changes,” he adds.

Undoubtedly, the successful migration from physical classrooms to virtual ones

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hinges on technology. "Stable internet connectivity is necessary for synchronous online learning," says Lau, adding that both live lectures and tutorials are carried out in this manner.

"For students with connectivity problems, they can opt for an asynchronously mode. Live sessions are recorded so that students can watch them anytime via our learning management system.

"Some lecturers also prepare pre-recorded materials for students' reference. Live platforms such as Microsoft Teams, Blackboard Collaborate Ultra and Zoom were deployed to allow live sessions to be held. These platforms allow not only the delivery of lectures but also enabled communication between the lecturers and students," he says.

Taylor's Schools' Gan says that to successfully transition to e-learning it is important to make things as straightforward and simple as possible for learners and parents. "For example, Nexus Singapore set up a dedicated, easy-to-navigate website, making all materials, apps and classwork available to parents with children of different age groups."

But it was not plain sailing in all cases. Khazanah Research Institute noted in its paper, *Covid-19 and Unequal Learning*, that one of the obstacles to e-learning was the limited availability of devices to support e-learning.

The findings of an MoE survey, involving 670,000 parents and about 900,000 students, showed that only 6% of students had personal computers, 5.76% had tablets, 9% had laptops and 46% had smartphones.

What's more, even if the household had a computer, it would have to be shared with other household members. Unsurprisingly, there was a lot of anecdotal evidence and reports of teachers resorting to WhatsApp and Telegram to send study materials and communicate with students and their parents.

**Teachers rise to the challenge**

Teachers play a crucial role in the online learning landscape. So, equipping them with the skills and knowledge to deliver online classes effectively is the key.

Within its online teaching and learning platform, the MoE has set up the Teacher Digital Learning Community (established with the support of Unicef) to train teachers on how to build and launch digital content for remote teaching and learning. To date, 2,400 teachers from more than 1,600 schools have participated in this online teacher training.

iTrain Group, a leading Google for Education Partner in Asia-Pacific, was one of the teacher training providers. According to its co-founder and executive director Datuk Eric Ku, the company ran webinars for about 2,000 primary and secondary school teachers as well as university lecturers during the MCO period on the use of tools such as Google Classroom, Drive, Calendar and Hangouts to help them engage with students as well as track their progress.

The webinars covered online communication, smart classroom, tips to engage with students online and facilitation of group work in a virtual classroom, among others. "The response from teachers was very encouraging and many said they were able to engage with their students better after the training," says Ku.

Gan believes that teachers need to be a lot more creative in coming up with ideas to keep their learners engaged and stimulated. "Especially the younger ones as their attention span is much shorter than that of the older children," he says.

For some disciplines, teachers have had to think outside the box. Take the teaching of music, which relies on being in the same room and reacting live to one's musical colleagues. Sunway University's School of Arts (SOA) lecturer Samuel Tan and adjunct faculty member David Chin worked to find new solutions to address this. Both produced ensemble videos (Tan working



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with small ensembles and Chin with the larger ones), where students and lecturers recorded their own parts and layered them to form an amalgamated product that allowed everyone to “play together”.

Achieving this required extensive planning, from analysing scores and understanding their roles and responsibilities, to anticipating the possibilities and choreographing the musical expression.

Basically, everyone had to hear the music in their head first, and hear it in the same way, through extensive discussions and preparations, say SOA lecturers Andrew Filmer and Tan.

The process elevated the level of self-awareness one needs as a musician, says Tan. What’s more, the new education adventure meant having to deal with software and learning how

to audit audio and video. “We are not just reading music scores but sound waves,” he points out.

#### Preparation for the digital age

Even before the pandemic forced educational institutions to go online or take advantage of technology, there was already high growth and adoption in educational technology, says the WEF, pointing to global edtech investments that reached US\$18.66 billion in 2019. The overall market for online education is projected to reach US\$350 billion by 2025.

From language apps, virtual tutoring and video conferencing tools to online learning software, there has been a significant surge in use since the outbreak of Covid-19.

But beyond having the tools for students to acquire knowledge, some argue that education should also prepare students for the digital age — to live and work in a world of automation and artificial intelligence. Geoff Spencer, a writer for Microsoft, says in a recent article that children who start school from now on will grow up to be workers and leaders in a digital-first world that will demand new skills and new ways of thinking.

“To succeed in life and at work, they will need all the social, emotional and academic support they can get via rich and flexible learning experiences that will differ vastly from the schooldays of their parents,” he says, adding that education’s age-old three Rs — reading, writing and arithmetic — are being joined by a fourth, Rethink.

Ku agrees, pointing out that to create a successful digital economy that contributes to the country’s GDP, more digital creators will be needed. That is why he and Bikesh Lakhmichand established iTrain, which focuses on digital technology education, back in 2005. Although the company has worked with the governments of a few countries to train graduates and professionals, there has not been much success in developing digital creators.

“The best we can do is to produce super users of digital tools such as AI, big data, data analytics and other software tools. To solve real-world problems, the individuals need to have a strong foundation in mathematics and science,” says Ku, which prompted the company to start iTrain Kids a decade ago.

The goal is to expose children (from as young as six or seven) to coding. “This way, they will find the reason to learn mathematics and science in a fun way from a young age. And the hope is that they will pursue computer science at the tertiary level or become a coder to solve real-world problems using technology,” he adds.

Looking ahead, there is a general consensus that online learning is here to stay, but in the form of hybrid or blended learning combined with physical classrooms. Ang believes that Malaysia is just scratching the surface with online learning, pointing to education technology or edtech start-ups in China such as Yuanfudao and 17zuoye.

Some of the digital trends such as virtual reality (VR) and augmented reality (AR) are already impacting education solutions.

Sunway University’s SOA, for instance, is looking into ways to enhance the university’s approach to online learning by integrating a culture of virtual learning. It is using VR to develop collaborative teaching spaces and student-centred learning opportunities, integrating AR and VR into more undergraduate and postgraduate courses and encouraging students to use AR and VR in course assignments.

Unicef, in its recent Covid-19 case study on education in Malaysia, points out that online teaching and learning platforms that incorporate accessibility features can be pathways to making education systems more inclusive. This overcomes barriers for teachers and students with disabilities. The Teacher Digital Learning Community can also help narrow the digital divide, it says, noting that almost half of the teachers who participated in the learning community are now serving children in rural communities. — By Sreerema Banoo