



POORER PUPILS PAY PRICE OF PANDEMIC WITH E-LEARNING SHORTCOMINGS

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The shutdown of schools because of the pandemic has disrupted education worldwide, affecting more than 1.7 billion children, youth and their families.¹ Worse, at least 463 million pupils and university learners around the world have abandoned their learning or gone "off the grid", becoming completely uncontactable – likely due to a range of compounding factors, such as difficult socioeconomic conditions and geographical and physical inaccessibility.²

Malaysia's students have not been spared and the learning crisis that was already in place before the pandemic has been exacerbated. Some of the reasons for this include the digital divide, reduced effectiveness of interaction between teachers and students, and limited parental support. At the same time, educators also experienced difficulties adapting to new pedagogies brought upon by the shift to remote learning.

Despite the government's Covid-19 policy responses, there are growing concerns on widening educational inequality in the country that could lead to long-term repercussions in human capital development and economic growth.

This article highlights how Covid-19 has impacted Malaysia's education and charts a course for the country to be more resilient in the future.

Impacts of Covid-19 on education

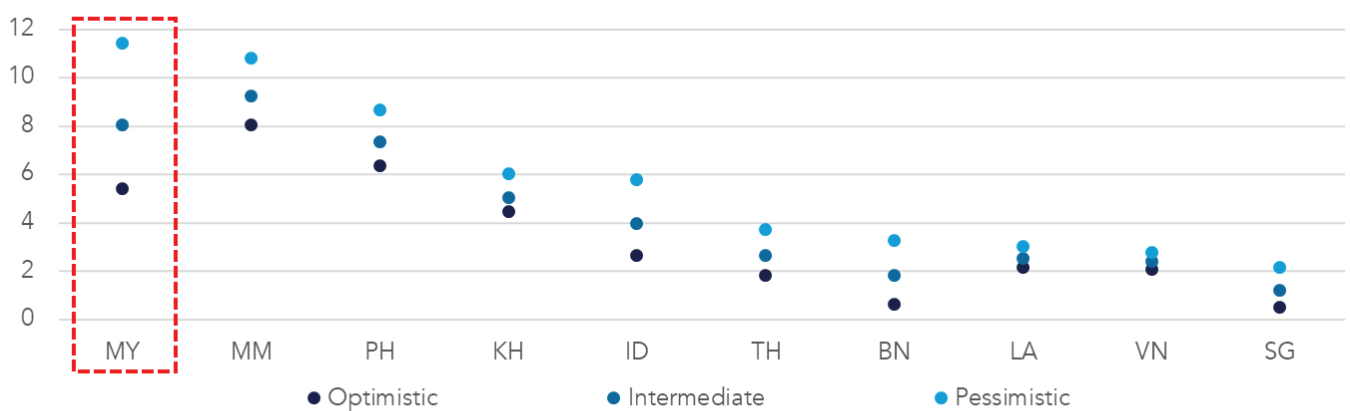
Pupils of different ages and income groups have experienced setbacks in learning due to lockdown measures and school closures. This was especially apparent for vulnerable families who have limited access to resources, causing them to face severe consequences in terms of educational access. Specifically, they suffered (1) learning losses, (2) digital learning disruption and (3) ineffective teaching quality and delivery.

Extensive learning losses

Pupils across the world have suffered profound learning losses because of school closures. International evidence reveals that these closures lead to poor educational performance. For instance, the share of pupils in Mexico unable to understand simple texts rose by 15 to 25 percentage points.³ Moreover, in South Africa, weaker reading performance of grade 2 and grade 4 pupils indicated learning losses ranging between 57% and 81% of their schooling year.⁴

Malaysian pupils have suffered similar losses. Studies show that they lost between 5.4 and 11.4 months of schooling because of the crisis.⁵ This makes Malaysia among the worst in the region in terms of time lost on learning (Figure 1). Engagements with parents revealed that school closures caused young children to be unable to grasp the basic 3Rs (reading, writing and arithmetic).⁶

FIGURE 1. Learning losses, by country in SEA
Number of months lost, based on 3 scenarios



Source: ADB
Note: MY=Malaysia, MM=Myanmar, PH=Philippines, KH=Cambodia, ID=Indonesia, TH=Thailand, BN=Brunei, LA=Lao PDR, VN=Vietnam, SG=Singapore

There are numerous factors that have contributed to this issue, including difficulties for students in accessing stable internet and digital devices, ineffective interaction between pupils and teachers, fatigue from online learning, a lack of a conducive educational environment and poor economic conditions. As a result, some of these factors have led to an alarming total of 21,316 Malaysian pupils dropping out of school before completing their education between the period of March 2020 to July 2021.⁷

The learning gap and digital divide

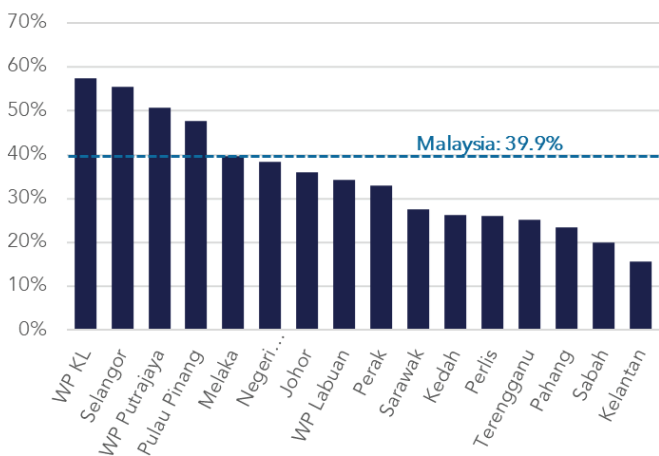
Since the start of remote learning, there have been unequal impacts across pupils of different socioeconomic backgrounds and geographical locations in Malaysia.

Low-income households, residents of rural areas and the urban poor face learning difficulties because of limited access to online tools and infrastructure – compounded by their worsening socioeconomic circumstances.

This is a development that has been reproduced across many countries. In the United Kingdom for example, children in low-income households have spent much fewer hours on educational activities, such as online classes, private tutoring and other schoolwork, relative to better-off families.⁸ In the United States, there was also a considerable disparity in access to computers among privileged and underprivileged 15-year-old students.⁹

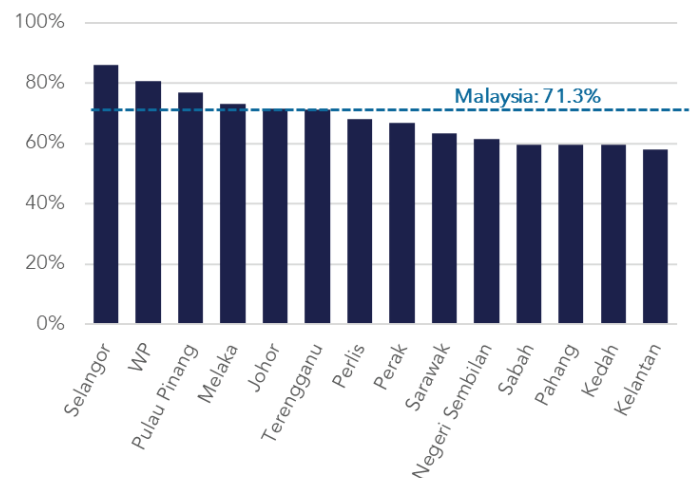
In Malaysia, this gap in educational access has become more evident because of geographical location. For example, online learning was particularly challenging for pupils in Sabah due to poor internet coverage, which made online assessments or lectures difficult to follow.¹⁰ This can be attributed to the stark difference in broadband penetration rates between Malaysia's regions. As of the third quarter of 2021, fixed-broadband penetration rate in cities like Kuala Lumpur stood at 57.4% while in lesser-developed states, such as Sabah, it was only about 20% (Figure 2).¹¹

FIGURE 2. Fixed-broadband penetration rate (%), by state



Source: MCMC

FIGURE 3. Share of household with computer access (%), by state



Source: MCMC

Besides poor internet connectivity, access to electronic devices has also been a major concern among students, particularly for those in rural areas (Figure 3).¹² A survey by the Ministry of Education (MoE) suggests that about 36.9% of students in Malaysia did not possess digital devices to support them in online learning. Notably, in Sabah, 52% reported not having access to any digital device, including smartphones.¹³

The implementation of remote learning has also revealed other pressing issues, such as the need for sufficient and suitable digital devices in a single household. Some pupils have had to share gadgets with their siblings or depend on their parents' mobile phones to keep up with school.¹⁴ For parents who do not have the luxury of working from home, leaving children without a means to attend online classes is another further cause of learning disruption.¹⁵

Ineffective teaching and training

Another factor that has further widened educational inequality since the crisis was the quality of teaching. Although classes can still be conducted online during lockdowns, this might not be the case for all educational institutions, especially for Technical and Vocational Education and Training (TVET). While some educators may excel in remote teaching, more needs to be done to provide other educators with guidance.

Converting physical learning to e-learning can be difficult for certain programmes due to the infrequent use of distance learning before the crisis. For instance, TVET students who focus on hands-on training and practical skills require laboratory equipment to perform their tasks.¹⁶ The specific needs of TVET students are unlike those enrolled in academic-based programmes, which are easier to teach online.¹⁷

Globally, the disruptions in TVET have been due to several issues, such as shortfalls in remote-learning platforms and internet infrastructure, a lack of skilled teaching staff, resistance to change, interruptions in apprenticeship programmes and limited finances.¹⁸

Similarly, in Malaysia, the proficiency of TVET instructors and educators in ICT has been one of the key issues affecting learning continuity during the MCO.¹⁹ As most were used to conventional teaching methods particularly among older instructors with lower ICT skills,²⁰ their capabilities in integrating digital technologies into classrooms could be diminished. They also lacked awareness of how to utilise these technologies effectively, possibly due to insufficient training.²¹

Generally, a lack of training and preparation time has affected the quality of teaching in almost all education sectors. Studies show that the pandemic has led to increased hours, workload and expenses for the educators at higher learning institutions and schools. The demands of the remote learning system have increased the workload of educators, requiring them to undertake more tasks than they had before the pandemic, such as preparing online teaching materials, monitoring pupils' involvement in classes and learning how to integrate ICT into teaching. Limited support from parents with lower levels of education also added more teaching responsibilities for the educators.

As such, these conditions have contributed to stress, exhaustion, anxiety and other health issues among teachers, further impacting the quality of distance learning.

Long-term consequences of disruption to education

Education plays an important role in human capital development, so any form of disruption can severely affect the stock of knowledge and skills that people need to be more productive. Historically, across Asia, human capital has been an important driver of economic growth, capital accumulation and technological progress. This resonates with endogenous growth theory, which posits that economic growth is driven by internal forces, including human capital.

Research in OECD countries suggests that an extra year of education could lead to an increase in GDP per capita by 6%, in addition to further indirect positive impacts through creating a higher-skilled and more productive pool of labour.

Similarly for Malaysia, education is one of the key drivers of the country's short- and long-run economic growth. Previous findings have shown that greater investment in education and a highly educated labour force would strongly benefit Malaysia's economic development.

As such, pandemic-induced disruptions are likely to cause a substantial loss in human capital due to prolonged disconnection from education and training.

Widening educational inequality would negatively impact the human capital accumulation needed to enhance national productivity and economic growth. In turn, income inequality would also worsen.

For instance, a loss of about one-third of schooling years as a result of the pandemic is projected to cost income losses of 3% for students in the United States as well as a loss in cognitive skills, equivalent of a 1.5% decline in GDP.²²

In Malaysia, estimates show that shutdown of schools could cost the nation about RM80 billion annually.²³ This is through the potential decline in productivity following Covid-19 induced learning losses, which directly affects the quality of human capital (i.e. skills in the labour force). These learning losses also exacerbate income inequality, with disadvantaged pupils facing the greatest impacts. The same study shows that in terms of earnings, school closures will result in average income losses of between RM464.26 and RM1,121.95.²⁴ This shows how severe the impact would be for potential labour market entrants in the long run if structural issues that caused learning losses are not addressed promptly.

Call to action

Reopening of schools is about making up for the losses faced by pupils. But remote learning is likely to continue as we now need to live with the pandemic while adhering to standard operating procedures (SOP). This paper highlights three areas for policy action to narrow educational inequality and equip Malaysia for future crises.

1. **Enhance the quality of online teaching and educational platforms.** The government has launched several education-based channels, such as DidikTV, Kelas@Rumah and PerkasaKU to bridge the learning divide and support vulnerable pupils during the crisis. Yet, based on the feedback from parents and educators, there is a need to improve teachers' proficiency and programme content. For instance, several programmes were deemed "uninteresting, not holistic and untimely". The quality of delivery may also be affected by language proficiency of educators. As such, more academically qualified teachers should be provided with training on effective methods for online learning. Regular evaluation of the educational platforms can also weed out ineffective and questionable programmes.

Training must go beyond the teachers involved in education-based channels. This can be in the form of training on the availability and use of digital resources for pedagogical practices and also on ways to create an enthusiastic and motivating environment for pupils.

2. **Address exclusion through tailored assistance for the vulnerable.** As remote learning continues, there is an urgent need to focus on the limiting exclusion. Pupils from vulnerable groups are disproportionately at risk of falling through the cracks, causing them to face severe learning losses. For instance, as mentioned earlier, limited access to adequate digital devices directly limits the learning time for each student at home. Therefore, more effort should be directed towards addressing this problem.

More than 131,000 laptops were distributed to underprivileged pupils under the Tabung Cerdik initiative.²⁵ However, this amount still falls short of the Budget 2021 target of providing 150,000 laptops.²⁶ Furthermore, a survey conducted by the Education Ministry in 2020 showed that more than 300,000 pupils do not own electronic devices for e-learning.²⁷ This indicates that the issue of a lack of access to devices is worse than expected. As such, increasing the provision of internet-enabled digital devices distributed to students could help bridge this gap. Additionally, policymakers should also carefully consider the specific needs of each household when deciding the type and number of devices provided to each household.

Concurrently, for younger children, a safe digital environment is another crucial aspect for learning. While exposure to digital tools may promote cognitive benefits, children may be exposed to content risks as well. On this front, parents and teachers play essential roles in supervision and educating children to exercise their digital rights diligently.

- 3. Establish a centralised digital TVET learning platform.** The national agenda to upgrade TVET to be on par with traditional academic pathways must be met with greater effort including measures towards converting practical training to virtual learning in a coordinated way. The establishment of the Digital TVET Learning Platform (DTLP) by Universiti Tun Hussein Onn Malaysia is a good start in ensuring learning continuity for TVET students. Next steps can include establishing the platform as a one-stop centre for TVET providers to gather knowledge and skills for digital teaching and learning. Effective engagement with and cooperation between industry players and relevant TVET bodies such as TVET providers, the National Digital TVET Innovation Centre (NDTIC) and the Malaysia Research Institute for Vocational Education & Training (MyRIVET), is necessary to develop course content and strengthen effective teaching and learning methods.

Additionally, the level of awareness on digital TVET is low among both TVET educators and pupils. An online survey shows TVET pupils' satisfaction towards distance learning stands only at a moderate level, particularly for those living in rural areas.²⁸ As such, there is a need to develop a TVET ecosystem with sufficient and relevant knowledge and skills to thrive in the future as mentioned above, while expediting the development of proper education infrastructure for TVET. When it comes to infrastructure, high development costs can be one of the main concerns in adopting frontier technologies, such as Virtual Reality (VR) and Augmented Reality (AR), in TVET remote teaching. As such, public-private partnerships should be encouraged to share the cost burden.²⁹

Conclusion

The pandemic has significantly undermined children's access to education. School closures have cost them months of learning, and has been exacerbated by poor socioeconomic conditions, remote locations, ineffective interaction with educators and the requirements of virtual learning. More needs to be done to serve the needs of the underprivileged who have endured more losses than their peers in higher socioeconomic status. Besides pupils, teachers have also been affected by the shift to remote learning due to the lack of training on new pedagogy to suit online teaching. These setbacks will inevitably widen educational inequality, which could lead to long-term ramifications for Malaysia's human capital development and economic growth. The inadequacies in existing policy measures call for a re-evaluation and reimagining of education to adapt to the reality that remote learning is here to stay, and that action must be taken in the event of future crises.

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