Online learning, education for all

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The diffusion of information and communication technology (ICT) into all aspects of our lives and its impact on altering the nature of social interactions is not a new phenomenon. When coupled with additional push factors, such as the current COVID-19 pandemic that forced many countries to implement strict social distancing policies by closing offices and schools, we are now entering a new era of exploiting ICT in full gear to keep the world going while keeping our feet on the ground.

In the last two months, we have witnessed students from primary to tertiary education use laptops or smartphones to access online learning content while their schools and campuses are closed. More than 60 higher education institutions in Indonesia have now conducted online learning by exploiting distant education platforms.

As the tech-savvy young generations including children seem to be excelling in adapting to online learning, we are being more and more convinced that maybe the way education is delivered will never be the same again even after COVID-19. The question is, is this new way of learning really benefitting the community?

Online learning was initially seen as a cheaper and more flexible alternative for developing countries to increase the number of students who have access to fulltime education and to close the education divide between rural and urban students. The developing countries, however, are facing many challenges in implementing online learning, from poor ICT network infrastructure, a lack of quality content and issues over the competencies of the people that interact with the e-learning system.

Indonesia is in a unique position to exploit the advent of online learning. More than 171 million or 69 percent of Indonesians are connected to the worldwide web with an internet penetration rate that stood at 63.5 percent in 2019 according to the latest survey by the Association of Indonesian Internet Service Providers (APJII), which is higher than the average of Asian countries.

However, most Indonesian internet users are relying on the expensive and limited capacity mobile network, instead of the broadband network that can easily cater to the online learning requirements that require a large data exchange especially for video conferencing.

Thanks to the vast expanding cellular network in the last decade, Indonesia's 4G network as of early 2019 has covered more than 76 percent of all villages. In comparison, the penetration of the fixed-line broadband network is still below 10 percent nationally.

Providing decent online learning is not only a challenge for developing countries. The developed world, especially those with large territories and sizable populations living in rural areas, are also facing similar odds.

Look at our neighbor, Australia, which has a long history of so-called distance education. Almost 29 percent of its population live in remote areas and require access to decent infrastructure yet also have poorer welfare than people living in urban areas, which pushes many rural youth to move to big cities for a better education and jobs.

Australia has crafted various methods to deliver education to rural students. It started with the paper-based method, which was heavily dependent on postal services, then moved to an electronic-based method, particularly computers, email and faxes, as well as radio satellites that deliver two-way audio and one-way video transmission.

The advent of digital communication, along with the development of ICT infrastructure, has drastically transformed not only the way distance education is carried out, but also drives significant social changes. Australian rural communities recently are witnessing the slowing rate of the brain drain. Online learning has benefitted students living at a great distance from tertiary education institutions. It keeps young people in their home areas, thus enabling them to continue to make contributions to their communities. While enrollment in online studies has grown by over 40 percent in recent years, 20 percent of rural Australians are choosing to upgrade qualifications or commence a career in their local area while studying.

Online learning has also changed the landscape of Australia's higher education. The relative ease of putting learning content online, the flexibility for the students and the perception of lower costs have resulted in an increase of demand for online courses as well as online offerings in universities.

Learning from Australia's experience, we can predict what will happen in Indonesia if the country succeeds in capitalizing on the opportunity created by the COVID-19 pandemic to advance and to close the gap in the education sector.

We can imagine that online learning will enable Indonesian teachers in big cities to teach students in rural areas, as well as provide capacity-building training to teachers in rural schools. Lecturers of tier-1 universities can share their expertise and knowhow to students in regions outside of Java. Online learning also can facilitate everyone to contribute to the advancement of the education sector through knowledge sharing.

We can expect the mid-term impact in which Indonesian students in rural areas no longer need to go to big cities to get a better education, thus the rural community can retain their talent to help develop villages. In the long run, the social and economic impact will be enormous, especially in helping the government's effort at regional development equalization.

Infrastructure wise, Indonesia is not lagging too far behind Australia, which only began investing seriously in developing national broadband networks in 2009. Last year, Indonesia completed the Palapa Ring broadband project, which first commenced in 2007, connecting all 514 regencies and/or cities with a fiber-optic network to enable the country to reap the benefits of distance education.

The period of school closure should be utilized by all stakeholders in the education sector to adapt to the e-learning ecosystem and find the best formula for how best the online education content should be developed and delivered.