



TECHNOLOGY-ENABLED INNOVATION IN EDUCATION IN SOUTHEAST ASIA (TIESEA) DIAGNOSTIC ASSESSMENT REPORT – PHILIPPINES COUNTRY REPORT MARCH 2022

EXECUTIVE SUMMARY

Based on the five pillars of the ADB EdTech Readiness Framework, this report describes the current situation of education in Philippines in general, with a specific focus on how EdTech in being implemented to improve the quality of teaching and learning. The five pillars include infrastructure, government, schools/teachers, parents/students, and EdTech providers. By identifying the existing status of EdTech readiness, the report seeks to provide evidence against which decision-makers can identify initiatives likely to make a positive contribution to the quality of the education ecosystem and opportunities for public-private partnerships.

The TIESEA team, as part of the study in the Philippines, also undertook a gender analysis and the report is presented in full in Annex 3. Historically, the education system in the Philippines favored males over the females, but from the 1970s onwards the number of college-educated women began to surpass that of men. It is reported that, currently, the number of girls completing secondary education surpasses that of boys by 12%. The Philippines is the only country in Asia to be in the top twenty for gender parity, though there is an underrepresentation of girls and women in the technology sectors, mostly due to cultural traditions and family preferences. Nonetheless, there are proportionally more women in the service sectors of the economy where there is often a high reliance on ICT skills. In contrast to international averages where, typically women's aggregate wages are 20% lower than men's, in Philippines women's earnings are, when taken as a whole, are 10% higher. Although a great majority of female entrepreneurs operate in the small to medium enterprise (SME) sectors only a small proportion of them have had any training about harnessing technology as part of entrepreneurship training. This is despite man campaigns to promote women's expertise in ICT. Nonetheless, recent government policy moves have resulted in increasing numbers of women enrolling in STEM-related disciplines at university level.

Infrastructure

In terms of **power supply and electricity access**, in 2020, the household electrification level in the Philippines was at **94.5 percent**. Infrastructure remains expensive, and the geographically scattered country makes it hard to get good telecoms infrastructure in place, and natural disasters are an issue. In 2020 DepEd reported that **there were 2,414 schools that did not have electrical supply**. In these schools, about **350,000 learners and 14,000 teachers did not have the opportunity to avail of the remote learning materials** offered in lieu of face-to-face sessions during the pandemic.

The country has a major challenge in terms of Internet speed. With 22.50 Mbps average mobile speed, the Philippines is in the 83rd spot out of 134 countries by the Portulans Institute. The slow internet connection is felt all over the country. The business and education sectors are not able to conduct their activities efficiently because of this slow Internet connection. With 22.50 Mbps average mobile speed, the Philippines is in the 83rd spot out of 134 countries by the Portulans Institute. Unreliable connectivity is another major issue as it reaches only 34% of households and 48% of schools.

On **devices and hardware**, mobile phones are the most popular among Internet users aged 16 to 64 who use the Internet at an average of 10 hours a day. 96.5 % of the 73.91 million users access the Internet via their mobile devices. Laptop or desk top computers are the second most used, followed by tablet devices, non-smart mobile phones, games tablets, smart wristbands, streaming sticks, smart home devices, and virtual reality devices. About 2 out of 5 (41.4%) households had personal computers or broadband Internet. Mobile devices are used primarily for social media purposes.

Regarding **radio/TV broadcasting strategies, content creation and transmission**, the country has robust communication structures and facilities, as reflected by: (a) more than 952 radio stations all over the country (AM stations: 369, and; FM stations: 583, shortwave); (b) three major TV channels with nationwide coverage, with provincial sister stations and (c) more than 400 cable stations and community radio-TV stations, and (d) three (3) major cell phone providers and eleven (11) local providers. These media networks broadcast educational programs for free.

Government

There is strong government support for technology in education, with special focus on hardware provision to schools. The prevailing model of classroom integration is learning about technology (i.e., digital literacy to prepare for the information age workforce) or teaching with technology (i.e., digitizing lesson plans to move from chalkboard to projector), but not learning with technology.

Government policy development/funding. The country's Digital Transformation Strategy (PDTs) of 2022 was developed by the Department of Information and Communications Technology (DICT).

Primary initiatives of the Government on Ed Tech are: (1) Internet in Schools, *iSchools* project which provide public high schools with computers with broadband internet connectivity (2) by educator's training, tech support, and monitoring and evaluation, and (3) Regional ICT that Centers help spur regional development through the use of ICT in education.

DepEd has mobile laboratories containing tablets and laptops that can be moved from one classroom to another. The DepEd has also launched the "Digital Rise" campaign which provides offline-accessible OER with every school computer delivery, along with training on how to create digital resources. The TESDA Online Program (TOP) is a major TESDA delivery strategy in responding to the lockdown of TVET learning centers during the pandemic. TOP is a web-based platform that offers free Massive Open Online Courses (MOOCs) for the technical education and skills development of the Filipino learners.

The main guiding body in the **education and performance measurement** of both DepEd and TESDA ICT-based initiatives is the Philippine Qualification Framework (PQF). It is an inter-agency program composed of DepEd, TESDA, CHED, Professional Regulation Commission (PRC) and the Department of Labor and Employment (DOLE). Its primary aim is to address gaps in the education, training, professional, and industry sectors. Its goal is to align the national training programs with international standards.

School closure has been the primary measure to mitigate the adverse effects of the COVID-19 pandemic. This closure of schools is expected to lead to learning loss, drop-outs and higher inequality in school performance.

School/teachers

Regarding **teacher capacity in educational technology**, Filipino educators feel the need for adequate training on ICT since they are generally unprepared to do ICT-related tasks. They also felt that it is **not only teachers who need preparation but also government, educational institutions, academic staff, students, parents, and even academic recognition bodies**.

Training. In 2020 DepEd embarked on a massive in-service teacher training program to respond to the ICT training needs of teachers. DepEd offices at central and local levels undertake the development of printed self-learning modules, downloadable digital resources, radio and television programs, and massive teacher training and orientation efforts.

Training in terms of ICT pedagogy integration in pre-service teacher education. The overall picture is promising. A recent research study was conducted to determine the readiness of teacher education institutions to integrate Ed Tech into pre-service teacher education. The findings suggest that **education managers felt that they are ICT-ready** in terms of selecting and integrating digital resources for teaching and learning. In terms of **school/teachers**, particularly on **teacher capacity in educational technology**, Filipino teachers feel the need for adequate training on ICT since they are generally unprepared to do ICT-related tasks such as tracking and analyzing student performance. ICT resources are not regularly used by teachers for instructional purposes.

As regards, **equipment and software**. In 2020, there were 45,869 classrooms with television sets, projectors and computers that support ICT-assisted teaching in schools. However, not all schools with computers had the same level of access. Schools with large student populations had challenges because of inadequate computers.

There are major **Governance** policy issuances such DepEd Computerization Program which have made technology available in schools: (1) The use of ICT is anchored on the Digital Rise Program, under the Public Schools of the Future (PSOF) Framework, pursuant to *Sulong Edukalidad*; (2) Learning Continuity Plan (LCP) specifies that “no face-to-face learning shall take place unless local risk severity allows for it,

Funding. The education sector has significant increases in budget allocation for its Computerization Program (DCP) which aims to provide ICT packages and IT infrastructure in public schools.

Home students/parents

In terms of **ICT's place in the Filipino home**, 73.9% of Filipinos aged 10 to 64 years old surf the Internet and other platforms. They use the Internet more frequently for social media (73.9%) than for research work and e-mail (63.6%). Parents equally have high acceptance of ICT in their homes.

Regarding **online access to curriculum content**, both DepEd and TESDA deliver their digitized learning packages in their websites, Facebook YouTube and/or locally available reception sites. Through partnership arrangements, these learning packages are aired/transmitted via the broadcast facilities of radio/TV stations and cable network stations.

Community Support, support and assistance of local government units include: village education committees aid the delivery outfits by guiding them to the sites where students reside.

Providers – Companies and Public Private Partnerships

There are numerous **ICT providers/companies which have public/private partnerships** with the education sector on systems development and conduct of ICT-based projects (see Annex 2).

In the area of **partnerships and sponsorships** of Ed Tech projects, the country has partnerships with (1) international institutions and national government agencies engaged in education, including universities and colleges; (2) non-government agencies and private groups.

Presently, there are partnerships between government agencies with international institutions namely: Asian Development Bank (SEHS/SERD), World Bank (WB) United States Agency for International Development (USAID) United Nations Educational, Scientific and Cultural Organization (UNESCO), United Nations Children’s Fund (UNICEF), the Philippines and the Korean Government.

There is a growing market for content management systems, and content repositories with curriculum-aligned resources, but this commercial sector will have to compete—ideologically and financially—with the government’s own open educational resources (OER) movement. The Philippines Department of Education (DepEd) has launched the “Digital Rise” campaign that includes providing offline-accessible OER with every school computer delivery, along with training on how to create custom digital resources. Whether this Digital Rise is the new official vision and strategy for ICT in education, and whether DepEd will be given the leadership and authority to coordinate EdTech across the country, remains to be seen.

At present, there is strong support for connecting last-mile schools and harnessing technology for out-of-school youth. Yet the focus remains hardware provision and improving internet connectivity or finding offline solutions for general digital pedagogy – that is, to say, pedagogy that is enhanced by digital resources and introduced by teachers with a good understanding of the application of EdTech to teaching and learning. There is not a large market for subject-specific EdTech software or personalized learning applications but adaptive-learning software that personalizes learning by using artificial intelligence and machine learning techniques to “adapt” the learning path, offered to an individual student in time, could be introduced in the longer term to resolve this issue.

This Executive Summary presents preliminary findings and an official ADB publication will be produced in due time