Technology-Enabled Innovation in Education in Southeast Asia (TIESEA)

Diagnostic Assessment Report – Cambodia 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 Cambodia in general, with a specific focus on how EdTech is being implemented to improve the quality of teaching and learning. The five pillars of the framework include infrastructure, government, schools/teachers, parents/students, and EdTech providers. By identifying the existing status of EdTech readiness in Cambodia using this framework, 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.

Cambodia had a population of 16.83 million people in January 2021 (51.2% of Cambodia's population is female) and 8.86 million internet users in January 2021, giving it a 52.6% internet penetration rate[1]. In 2021 Cambodia had 12.00 million social media users (equal to 71.3% of the population). Cambodia is ranked 106th out of 130 economies in the Network Readiness Index (NRI) 2021, with impact (quality of life) as its key strength and governance as its main weakness (trust).

An account of the gender gap in EdTech is included in Annex 3) of this report. In brief its findings are that the Royal Government of Cambodia is committed to gender equality and over the past five years the proportion of women who are in the workforce has increased by 5% to 84%; but female's opportunities in EdTech are largely limited by cultural and family beliefs and values that see EdTech as being a male dominated field. Notwithstanding this, in Upper Secondary Schools the proportion of girls remaining is education is higher (54%) than boys (46%) and girls are increasingly opting for STEM subjects – though they are then more likely to follow science than technology options at university. More women are now becoming self-employed (65% of all SMEs are now owned and run by women) and their skills in using online eCommerce opportunities is a critical success factor here. In general women teachers have lower EdTech skills than men and lower levels of digital literacy. Although in general,

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[1] Kemp, 2021

across the country, smartphone ownership is high, rural women are the least likely segment of the population to own a cellphone.

Infrastructure

The extent of fixed line connectivity is extremely low in Cambodia, and the country has fast shifted away from this high-cost infrastructure and toward mobile communication, with 21.18 million mobile connections Cambodia also offers the most affordable mobile service in Asia, with an average monthly subscription cost of about $4. There are six mobile phone providers in Cambodia, and the country ranks 66th in the world in terms of mobile data prices, with an average of $1.50 for 1 GB of data (Cable.co.uk, 2020). Only 13.3% of Cambodian families have access to a computer, despite the fact that 41.1% of households in the Asia-Pacific area do (ITU, 2019). With a penetration rate of 125.8% among the general population, mobile devices (smartphones) are mostly utilized for internet access. 97.6% of Cambodian households have access to electricity.

The most popular form of media in Cambodia is television, which reaches 96% of the country's population through its 18 television channels. During COVID-19 pandemic, education TV programming broadcasted on National Television of Kampuchea and other cable TV networks throughout the country, such as a newly created TVK2 for educational broadcasting, Decho DTV's channel 22, and 55 new cable TV networks[2].

Government

The Rectangular Strategy Phase IV, ICT Master Plan 2020, Telecom/ICT (T-ICT) Development Policy 2020, Law on Telecommunication, and the ICT Strategic Framework are all policies produced by the Royal Government of Cambodia (RGC). Cambodia, on the other hand, is ranked 124th in the UN's E-Government Development Index and 129th in the E-participation index [3] indicating that these policy texts must be translated into practice and practical strategies.

In 2016, MoEYS implemented a curriculum framework, and in 2018, all levels of the school adopted a course syllabus that integrated student-centered concepts and techniques through inquiry-based learning. Computer programming is now part of the new national curriculum for students in grades 4 through 12. Additionally, there are programs that provide content on ICT, such as New Generation Schools, which focus on STEM, ICT, and critical thinking skills, and Caring for Cambodia, which increases workforce readiness and academic skills so that students can work in growth fields, including ICT, both of which collaborate with MoEYS.

The Education Sector Development Plan intends to have a system in place by 2030 that maximizes the use of ICT opportunities and data connectivity for real-time information exchange, analysis, reporting, and feedback for education performance measurement. For stakeholders (school managers and administrators, parents and local communities, MoEYS national and subnational, Ministry of Economic and Finance (MoEF), National Institute for Statistics (NIS), and ODA partners), the EMIS (Education Management Information System) will administer, plan, and monitor. Under EEQP2, this means a shift

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[2] Aide et Action Southeast Asia, 2020

[3] UN, 2020

from a client-server system to a web-enabled and integrated system, as well as decentralization and a new focus on Student Tracking Systems and School Information Systems (SIS), with financial support from the CDPF (Capacity Development Partnership Fund), which is managed and financed under UNICEF's guidance in partnership with the MoEYS, EU, and SIDA.

Schools / Teachers

To develop teachers' capacity and reform teacher training institutions at NIEs, TECs, and RTTCs to ensure the equivalence of training outcomes, especially in STEM and ICT, in-service and pre-service training must include new and modern pedagogical approaches and integrate ICT; to develop teachers' capacity and reform teacher training institutions at NIEs, TECs, and RTTCs must include new and modern pedagogical approaches and integrate ICT; and to develop teachers' capacity and reform In practice, however, ICT skill training for pre-service teachers is limited to basic computing such as Microsoft Office suite, internet browser, and using Windows operating system on a PC, and in-service teachers, with the exception of teachers from the ten New Generation Schools, receive no ICT training.

The National Institute of Education and four Regional Teacher Training Centers, which serve as a centralized pre-service and in-service government training institution, provide a time-based training framework rather than an outcome-based modular framework, but only rudimentary pre-service ICT training is provided, with no or only limited in-service training is provided. According to an ADB poll[4], about 5% of instructors make PowerPoint slides for teaching purposes on a weekly to daily basis, while 12% create videos on a weekly to daily basis. However, more than 70% of teachers indicated they 'rarely' to 'never' create online assessments/quizzes for pupils. More than 76% of the teachers polled said they don't use email or file-sharing apps like Google Drive, OneDrive, or Dropbox on a regular basis. Not all teachers appear to have frequent access to a computer in order to properly use a file sharing system. To communicate files among themselves or with pupils, most people utilize a social messaging tool like Telegram or a social media platform like Facebook. This indicates either a lack of awareness by the professors of the collaborative power (value) of file sharing systems or a lack of appropriate instruments to use them.

The lack of computers, no or inadequate Internet access, particularly unstable and/or insufficient bandwidth, are all major impediments to EdTech use in schools. There is also a scarcity of qualified personnel to administer EdTech infrastructure and provide support to users in schools. Only 17% of upper secondary schools and 5% of lower secondary schools have computer labs, according to MoEYS (2019). 40% of upper secondary schools have internet connectivity; yet, in most cases, the internet is only used for administrative purposes in the school administration office. Cambodia has put a lot of effort and money into developing and implementing strategies to improve the use of ICT in education. Schools, on the other hand, use a variety of paper-based forms to manually collect data for monitoring and evaluation purposes, such as student enrollment information, grades, and attendance records, for the EMIS system once a year, and then enter that data into the computer at the school administrative office.

More than 95% of respondents to the teacher poll[5] agree that the ability to share ideas, teaching experiences, and guidance is 'critical' or 'very critical' for a community of practice. The great majority of teachers still utilize the old-fashioned practice of writing letters or calling parents through students or peers (about academic problems, absenteeism, and behavior problems). Schools could use existing social messaging systems that teachers and parents are acquainted with, such as Telegram Group or

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[4] ADB 25 January 2021, Cambodia EdTech Country Situation Analysis.

[5] ADB 25 January 2021, Cambodia EdTech Country Situation Analysis.

Facebook Group, to create parents' groups for each class and the entire school as communication channels for instructors and school to reach out to all parents.

Between 20 and 37% of teenagers and adults have copied or relocated a file or folder, used copy and paste tools to replicate inside a document, sent e-mails with attachments, and transferred information between a computer and other devices. However, only about 2.5% have connected and configured new devices, generated an electronic presentation with presentation software, identified, downloaded, installed, and configured software, or written a computer program.

Students / Parents

During the COVID-19 pandemic, the demands of remote learning posed increased obstacles to Cambodia's ICT system. Students access to online education resources and remote learning via a combination of cellphones, PCs, TVs, and radios was found to be highly problematic. MoEYS has endeavored to ensure the well-functioning of remote instruction, offering various e learning options, in collaboration with development partners, such as UNICEF and UNESCO. The aim has been to provide a proactive engagement using a combination of lessons and exercises provided by class teachers in combination with online content provided by the ministry through various platforms such as Facebook pages and Youth and e learning platforms such as the E-School Cambodia mobile app. But the ability to access these online materials has been far from universal.

While students in metropolitan cities like Phnom Penh and Siem Reap have access to Wi-Fi hotspots in cafes and classrooms, most villages in sparsely populated and remote locations lack the digital infrastructure needed to support learning (online). On Telegram and Facebook, there are hundreds of groups and channels dedicated to school disciplines such as math, English, physics, and chemistry, as well as activities such as syllabus, learning content, and exams, where teachers and schools may share resources. Rural locations have less resources in terms of technical skills and affordability, while urban areas have more resources - access to devices, device service.

Providers – Companies and Public-Private Partnerships

UNESCO and the Ministry of Education produced elearning courses for lower secondary/basic education in 2019, and are among Edtech's partners and supporters. The Cambodian Union of Youth Federations collaborated with E-school Cambodia to develop a portal that provides free content to students in grades 1 through 12. JICA has produced online classes in collaboration with the Ministry of Education that will be available on an app named "Think!. SALA, Koompi, Tablet on Wheels (ToW), KAPE, EDEMY, E-School Cambodia, STEM Cambodia, E2STEM, Go Digital ASEAN Initiative, InSTEDDiLab, ArrowDot, SystemExperts, IT STEP Academy are some of the other Edtech providers in Cambodia, and described in full in Annex 2 of this report.

The IR4.0 policy direction is to incorporate the Digital Economy and Society Policy Framework 2035, which focuses on the development of high-speed broadband network infrastructure to support the smart living of 95% of the country's citizens, additional infrastructure regulations, infrastructure sharing, a government data center and cloud, and the promotion of public-private partnerships to address current infrastructure gaps as well as technical assistance. The role of EdTech in public education was brought into the spotlight as the government announced remote-study during the global COVID-19 pandemic.

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