

Alternative Learning System 2.0 Information and Communications Technology Strategic Plan 2022-2026







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Messages

From the Secretary

Together with the United Nations Children's Fund (UNICEF) Philippines, the Department of Education (DepEd) is pleased to share our Alternative Learning System (ALS) 2.0 Information and Communications Technology Strategic Plan 2022–2026.

With ALS being a viable pathway for out-of-school youth and adults to finish their basic education, DepEd continuously finds ways to enhance the learning of ALS learners with the use of ICT, and opens various opportunities for their basic and functional literacy skills and life skills development.

Nonetheless, we recognize the need to analyze the existing ICT-related policies and programs in ALS to further understand how we can address the gaps and improve the role of ICT in our program, which is already institutionalized in the country through Republic Act No. 11510 or the Alternative Learning System Act.

DepEd acknowledges UNICEF Philippines' support in integrating ICT into the ALS Program with this Strategic Plan that provides a clearer vision and work plan on the ICT program, projects, and activities, and paves the way for a more efficient and effective implementation of the ALS Roadmap and its goals. The Department expresses its utmost gratitude to the organization for extending its support to nonformal education.

May we all unite to modernize education management and governance to help empower ALS learners to be 21st century digital citizens.

Thank you and congratulations!

Leonor Magtolis Briones

Secretary



Messages

From the ALS Assistant Secretary

Since the development of the comprehensive five-year ALS 2.0 Strategic Roadmap and the implementation of the enhanced ALS K to 12 Basic Education Curriculum (ALS K to 12 BEC) in 2019, reforms in the Alternative Learning System (ALS) Program of the Department of Education (DepEd) have been moving at a significant pace. The strengthening and intensification of the Program are further supported by the prompt passage of Republic Act No. 11510 (the ALS Act) in 2020.

Even before the COVID-19 pandemic hampered the delivery of learning interventions in both the formal education and the ALS Program, the Roadmap has identified online delivery of ALS as an important component in achieving Strategic Goal 1 (Expand Access to Basic Education), which is also in line with the inclusion of Digital Citizenship in the six learning strands of ALS K to 12 BEC that demands higher competencies from ALS learners.

More so, information and communication technology (ICT) will enable the realization of the Roadmap's Strategic Goal 2 (Improve Quality and Relevance) by expanding the use of technology for both teaching and learning, and Strategic Goal 3 (Modernize Education Management and Governance) by automating core systems and processes.

When the pandemic exacerbated the challenges of distance learning, it also became more imperative for DepEd to once and for all explore the rollout of an online ALS program to reach more out-of-school youth and adults (OSYA), and improve their access to quality basic education. The pandemic likewise underscored the need to continuously evolve and improve the Program in order to respond to the changing, challenging, and exceptional needs of our ALS learners and ALS teachers.

Our sincerest gratitude to UNICEF. With your support, DepEd now develops the ALS 2.0 ICT Strategic Plan that aims to guide the Department and its partners in identifying ICT programs, projects, and activities that will help realize the goals of the Roadmap and one of the goals of ALS: to equip ALS learners for the challenges and opportunities of tomorrow.

In the next five years, we can look forward to another shift in the implementation of ALS, where ICT will be central in the improvement of teaching and learning outcomes, the improvement of the administration of the Accreditation and Equivalency (A&E) Test, the upskilling and retooling of ALS teachers, and the strengthening of ALS databases and of monitoring and evaluation processes. In the next five years, we can look forward to increased opportunities for ALS learners to truly gain education that is on par with that of learners in the formal system, discover skills and competencies that would be impossible without ICT, and become productive contributors to nation-building and to the global community.

Thank you.

G.H.S. Ambat Assistant Secretary Alternative Learning System



Messages

From UNICEF

UNICEF Philippines is honored to have collaborated with the Alternative Learning System (ALS) Program of the Department of Education (DepEd) on the development of the ALS 2.0 ICT Strategic Plan 2022-2026. This achievement is another milestone in our journey together in strengthening and modernizing the ALS Program, in line with the goals set forth in the ALS 2.0 Strategic Roadmap 2019-2024.

Recognizing how technology continues to change the educational landscape for the educators and learners in the Philippines, the ALS aims to provide opportunities for its learners to gain the necessary skills needed to thrive in the 21st century. This is very much in line with UNICEF's Reimagine Education initiative that serves as a global call to Member States to modernize education, building foundational, transferable, digital, and job-specific skills among children and young people, while ensuring an enabling and empowering learning environment. The global thrust puts prime importance on radically scaling up digital learning solutions for the most marginalized children and young people.

This Strategic Plan is a major step towards this end. By concretizing the role of ICT in three strategic goal areas of access, quality, and governance, the ICT Strategic Plan reflects UNICEF's shared vision with DepEd of providing increased opportunities for our Filipino children and youth to become globally competitive learners, thereby contributing to the achievement of the Philippine Development Plan and the Sustainable Development Goals through the 8th Country Programme for Children 2019-2023.

We would like to express our most heartfelt gratitude to our partners in the Bureau of Alternative Education (BAE, formerly ALS Task Force), ALS service providers, officials and teachers, and learners who have all contributed to the development of this remarkable milestone. Truly, it takes all of us working together to build a stronger and better future for every Filipino child.

We are committed to continuing our strong partnership with DepEd in ensuring that inclusive, quality education is easily accessible for all.

Oyunsaikhan Dendevnorov

Representative **UNICEF** Philippines

Acknowledgements

The ALS 2.0 ICT Strategic Plan 2022–2026 is the product of a collaborative effort among many individuals. It is with deepest gratitude that we devote this space to them.

We would like to acknowledge the leadership of the Bureau of Alternative Education (BAE, formerly ALS Task Force) of the Department of Education, spearheaded by Assistant Secretary G.H. Ambat and Director Marilette Almayda. We are also grateful to the Education Section of UNICEF Philippines, for ensuring that the ICT Strategic Plan went through rigorous consultations and a stringent quality assurance process coordinated by Maria Melizza Tan and Avelino Jr. Mejia. We especially thank Nicholas Tenazas for facilitating the process and writing the plan.

Our appreciation goes to Irene Barzaga and the technical team of DepEd BAE who led the coordination of consultation meetings and the review of draft versions of the Strategic Plan.

Finally, the ICT Strategic Plan would not have been possible without the involvement of a number of individuals from various organizations who have contributed valuable advice and comments via consultation meetings. We likewise extend our gratitude to the ICT in Education team of the UNESCO Asia and Pacific Regional Bureau for Education (UNESCO Bangkok), specifically Nyi Nyi Thaung and Toan Dang, for providing expert guidance in the use of the ICT in Education Policy Planning Guide and its companion ICT in Education Financial Planning Resource as well as providing technical inputs on the draft Strategic Plan.

The Strategic Plan also benefitted from the copy editing of Mae Aguinaldo-Mapa and the graphic design, layout, and illustrations of Janine Teng, coordinated by Jamie Lourds Donato (UNICEF Education Section).

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List of Abbreviations

AI Artificial Intelligence

ALS Alternative Learning System

APEC Asia-Pacific Economic Cooperation **ASEAN** Association of Southeast Asian Nations

BAE Bureau of Alternative EducationBEIS Basic Education Information System

BLP Basic Literacy Program

BP-OSA Balik Paaralan Para Sa Out-Of-School Adult

CLC Community Learning Center **DepEd** Department of Education

GIDA Geographically Isolated and Disadvantaged Areas

HRIS Human Resource Information System

ICT Information and Communications Technology

JHS Junior High School

K to 12 Kindergarten to Grade 12 **LIS** Learner Information System

LRMDS Learning Resources Management and

Development System

MIS Management Information System

NCR National Capital RegionNGO Nongovernment Organization

OOSCI Global Initiative on Out-of-School Children **OSCYA** Out-of-School Children, Youth, and Adults

OSYA Out-of-School Youth and Adults

PPA Programs, Projects, and Activities

PESTEL Political, Economic, Social, Technological,

Environmental, and Legal

PPST Philippine Professional Standards for Teachers

RA Republic Act

RBI Radio-Based Instruction

RPMS Results-based Performance Management System

UNESCO United Nations Educational, Scientific and

Cultural Organization

UNICEF United Nations Children's Fund **SDG** Sustainable Development Goal

SHS Senior High School

SWOT Strengths, Weaknesses, Opportunities, and Threats

SY School Year

TCO Total Cost of Ownership

TDIS Training and Development Information System

Tec-Voc Technical-Vocational

TV Television

TVET Technical and Vocational Education and Training

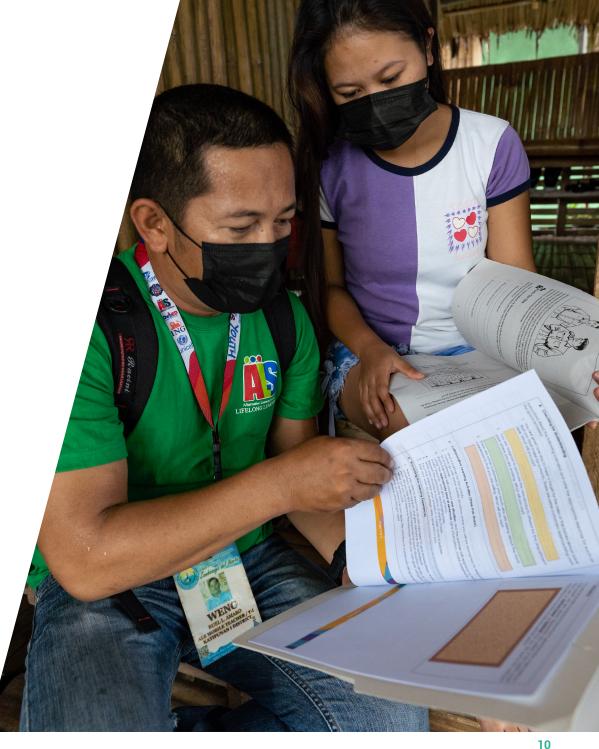
Background 01

Rationale

This Alternative Learning System (ALS) 2.0 Information and Communications Technology (ICT) Strategic Plan was developed to support the ALS Version 2.0 Strategic Roadmap. That Roadmap was also the major basis for the passage of the ALS Act or Republic Act (RA) No. 11510. It is important for the reader to be aware of at least these two major documents to fully appreciate the contents of the ICT Strategic Plan. These and other relevant policies and references are discussed briefly in Section 9.1.2.6.

The COVID-19 pandemic tested the flexibility of the ALS Program. It was arguably more prepared than formal schools to implement some form of remote or blended learning within a short timeframe. However, many areas for improvement were also discovered during this period. In the near-absolute absence of face-to-face sessions, the ALS implementers encountered fundamental challenges that were difficult to overcome without proper strategies and technologies.

More than being a COVID-19 recovery strategy, this Plan aims to ensure that the institutionalization of the ALS 2.0, as envisioned in the legal bases discussed earlier, be achieved effectively, efficiently, and equitably. ICTs are not panacea to everything that hinders the ALS Program from serving all out-of-school children, youth, and adults (OSCYA) nationwide, but it is a useful tool if harnessed properly.



01 Background

Methodology

This Strategic Plan was developed using the UNESCO Bangkok ICT in Education Policy Planning Guide and Financial Planning Resource.¹ Adjustments were done to account for the specific context of the Philippines and the pandemic. Intensive research and numerous consultations were conducted with key stakeholders. The final document was reviewed by a team from the Department of Education (DepEd) and UNICEF to ensure accuracy and overall quality. A more detailed description of the development process can be found in Subsection 9.3.

Chapter Descriptions

Chapter 2 provides a comprehensive description of the ALS Program. It serves as a quick guide to the Program's major dimensions, statistics, and challenges. It ends with a brief Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis that forms the basis for the Strategic Plan priorities. Chapter 3 states the Plan goals, which are aligned with the ALS Version 2.0 Strategic Roadmap. Chapter 4 describes the Strategic

Plan components like outcomes, intermediate outcomes, and outputs. The rationale for the activities is also explained; the components are arranged according to the Roadmap priorities of Access, Quality, and Governance. Chapter 5 outlines the Plan components into a Results Framework. The chapter proposes appropriate indicators and targets for the Plan priorities. It identifies gaps in available information and proposes additional data collection and analysis for these.

Chapter 6 summarizes some implementation considerations for the Plan, including responsibility centers, timetables, and risk management. Chapter 7 outlines the results of the Total Cost of Ownership template from the UNESCO ICT in Education Policy Planning Guide and Toolkit. It also puts forward potential strategies to fund the Strategic Plan. Chapter 8 is a list of the major references used in developing the Plan. Chapter 9 contains the annexes for the Plan. It provides a wider background for the ALS Program using the Political, Economic, Social, Technological, Environmental, and Legal (PESTEL) framework. It then adds a global perspective by looking at international best and worst practices. The chapter ends with a summary of the process undertaken in developing the Strategic Plan.

¹ UNESCO Bangkok. 2019. UNESCO Bangkok ICT in Education Policy Planning Guide. Bangkok. http://ppg.ictpolicy.guide; UNESCO Bangkok. 2019. UNESCO Bangkok ICT in Education Financial Planning Resource. Bangkok. https://fpr.ictpolicy.guide/



Basic Information

The DepEd ALS Program is a second-chance education program for learners who cannot participate in or cope with the formal school system. It offers a Basic Literacy Program (BLP) for those who lack the basic literacy skills of reading, writing, and numeracy, and an elementary- and secondary-level program where the learners must take an Accreditation and Equivalency (A&E) Test to obtain an equivalent diploma. DepEd expanded the Program coverage through the ALS-Education Skills Training (ALS-EST) with focus on employment skills training. As shown in **Table 1**, the number of enrollees in the ALS Program was increasing before the pandemic, given the high priority of the government for out-of-school children and youth.

Table 1: ALS Program Enrollment by Level, Selected School Years							
SY 2017-2018		7–2018	SY 201	8-2019	SY 2019-2020		
Program	No. of Learners	% Share of Total	No. of Learners	% Share of Total	No. of Learners	% Share of Total	
Basic Literacy Program	57,623	8.98	66,054	8.03	52,008	6.85	
A&E Elementary	107,871	16.81	137,985	16.77	132,128	17.39	
A&E Junior High School	476,090	74.21	618,974	75.21	575,587	75.76	
Total	641,584	100	823,013	100	759,723	100	

A&E – Accreditation and Equivalency, ALS – Alternative Learning System, SY – School Year. Note: Data obtained in March 2020.

The ALS A&E Test,² formerly known as the Non-Formal Education A&E Test, is a paper-and-pencil test specifically designed to measure the competencies and life skills of those who have neither attended nor finished elementary or secondary education in the formal school system.³ This nationally administered test for those who have gone through the ALS Program will allow the learners to obtain certification of completion at different exits in basic education, which may be used to access further education, job opportunities, entry to technical and vocational training, and entrepreneurship.

Elementary-level A&E Test passers are qualified to enroll in junior high school (JHS). The JHS-level A&E Test passers are qualified to enroll in senior high school (SHS), technical and vocational education and training (TVET) programs accredited by the Technical Education and Skills Development Authority (TESDA), or find gainful employment or self-employment. **Table 2** presents the passing rates for the A&E Test for 2017 and 2018.

Table 2: Passing Rates for Accreditation and Equivalency Test by Level, 2017 and 2018						
Date of Exam	Level	No. of Takers	No. of Passers	Passing Rate (%)		
	Elementary	15,536	6,952	42.56		
November 2017	Secondary	161,727	97,634	57.32		
	Total	177,263	104,586	59.00		
	Elementary	15,204	9,162	57.21		
March 2018	Secondary	130,361	96,361	69.49		
	Total	145,565	105,523	73.00		

² Government of the Philippines, Department of Education. n.d. A&E Test. https://www.deped.gov.ph/ae-test/

³ Government of the Philippines, Department of Education. 2016. DepEd Order No. 55, s. 2016. Policy Guidelines on the National Assessment of Student Learning for the K to 12 Basic Education Program. Manila. https://www.deped.gov.ph/2016/06/30/do-55-s-2016-policy-guidelines-on-the-national-assessment-of-student-learning-for-the-k-to-12-basic-education-program/

Program Assessment – Access

Table 3: Proportion of Philippine Population (Aged 10-64) who are Not Attending School by Reason for Not Attending and by Age Group, 2019 (%)

December not Attending Cohool	Age Group					
Reason for not Attending School	3-30	3-4	5-11	12-15	16-17	18-30
Philippines	24,807	3,885	633	431	500	19,359
Schools are very far	0.4	0.5	3.4	1.0	1.0	0.3
No school within the barangay	0.1	0.1	0.8	1.1	0.5	0.1
No regular transportation	0.2	*	1.0	0.9	0.7	0.1
High cost of education	2.2	0.1	1.4	1.5	4.3	2.6
Illness	0.9	0.3	4.2	3.7	3.4	0.7
Disability	1.3	*	8.2	9.8	4.6	1.1
Housekeeping/Taking care of siblings	4.9	-	0.4	2.0	3.5	6.1
Marriage/Taking care of children	13.4	-	-	1.5	9.4	16.9
Employment/Looking for work	36.6	-	0.8	9.2	20.4	46.1
Lack of personal interest	6.3	0.4	13.0	41.9	28.3	6.0
Cannot cope with school work/ Failing grades	0.4	*	0.7	4.0	2.0	0.3

Decompley not Attending Cohool	Age Group					
Reason for not Attending School	3-30	3-4	5-11	12-15	16-17	18-30
Philippines	24,807	3,885	633	431	500	19,359
Finished schooling	9.6	-	-	-	-	12.3
Problem with school record	0.2	-	1.2	1.6	1.3	0.1
Problem with birth certificate	0.2	0.3	2.0	0.2	0.2	0.1
Too young to go to school	16.6	97.8	52.3	-	-	-
Family income not sufficient to send child to school	5.8	0.2	8.1	14.4	15.4	6.4
Peer pressure	0.3	-	0.7	1.0	1.7	0.2
Bullying	0.2	0.1	0.7	1.4	0.9	0.2
Addiction to computer games	0.2	-	-	2.3	1.5	0.2
Expelled/Suspended	0.1	-	-	0.9	0.1	0.1
Other Reasons	0.3	0.2	1.1	1.6	0.7	0.2

Note: An asterisk (*) denotes a figure less than 0.1%; a hyphen (-) means data is not available.

Source: Government of the Philippines, Philippine Statistics Authority. 2019. Functional Literacy, Education and Mass Media Survey. Manila. https://psa.gov.ph/content/functional-literacy-education-and-mass-media-survey-flemms

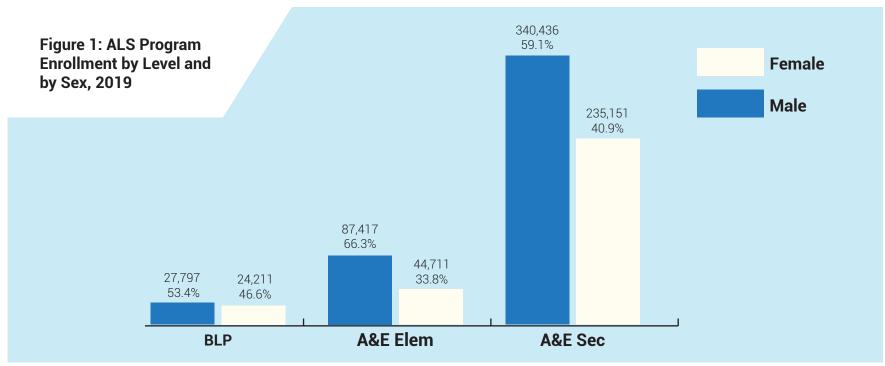
Target beneficiaries: Despite notable progress in access to basic education over the past 20 years, there are still significant segments of the population that are unable to complete the school cycle. These individuals accumulate in society and often experience disadvantages in terms of employment and economic opportunities. The ALS Program is the main option for these individuals, but the Program needs to be cognizant of the reasons they did not complete school in the first place so that the Program can serve them better.

For the 18 to 30 age group, the biggest reason for not attending school is the need for employment, followed by marriage and taking care of children **(Table 3)**. These two reasons go together, as individuals with family responsibilities also experience pressures to look for work and be employed.

The pressure to be employed is also the second most cited reason for not attending school in the 16 to 17 age group. These individuals have completed Grade 10 (JHS), and many are opting

to look for work rather than continuing to SHS and eventually to tertiary education. However, the most common reason for not attending school in this age group is lack of personal interest, which is somehow related to the pressure to be employed: if individuals do not see themselves as completing SHS, let alone college education, they do not see the need to delay entering the labor market after JHS. In this case, the lack of personal interest is not in the subject matter per se, but in the decision to continue spending time on education.

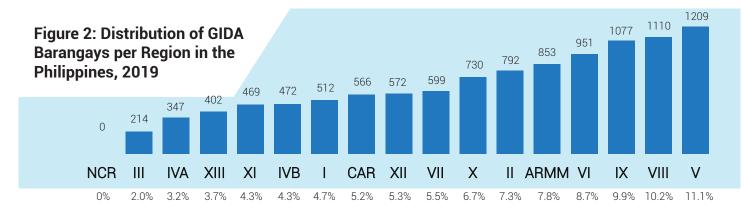
For the 12 to 15 age group, the biggest reason for not attending school is, by far, lack of personal interest. Here, the lack of interest is more concentrated on the actual lessons than in education in general. This age group represents adolescents, and the multiple changes they go through with their bodies and mindsets can distract them from the value of continued education. The second reason for not attending school in this age group is lack of family income for education expenses.



A&E Elem and A&E Sec - Accreditation and Equivalency for Elementary and Secondary levels, ALS - Alternative Learning System, BLP - Basic Literacy Program.

Gender dimension: The ALS Program is comprised of 60% male learners (**Figure 1**). This is influenced by the fact that more males drop out of school, especially during the high school years, leaving more potential male ALS beneficiaries in the community. Other factors like (but not limited to) traditional gender roles and time lapsed from last grade attended by sex also affect the gender imbalance of the ALS Program. In addition, government data show that for females, marriage or family matters is the primary reason for dropping out of school, with employment as second; while for males, employment is the primary reason with lack of personal interest as second.⁴ While a gender balance is generally desirable, closer study is needed to determine whether a certain gender will need to be targeted by the Program or whether there are gender-nuanced intervention modalities or approaches that need to be designed.

Tracking of dropouts: The ALS is where school leavers and dropouts can go for second-chance education. However, not all who enter the Program complete it despite the Program being more flexible than the formal school system. Unfortunately, since the ALS teachers are required to have 75 learners per year, they usually just replace the learners that leave with new learners. Those who prematurely leave the Program are not accounted for, and it is unsure if they can be found again during the next community mapping activity. A way of keeping track of these non-completers should be explored by the Program.



GIDA – Geographically Isolated and Disadvantaged Areas Note: Percentage values represent percentage share of total GIDA barangays. Source: Government of the Philippines, Department of Health. 2019. Department Memorandum No. 2019-0277. Manila.

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⁴ Government of the Philippines, Philippine Statistics Authority. *2019 Annual Poverty Indicators Survey*. Manila. pp. 83–87. https://psa.gov.ph/sites/default/files/2019%20APIS_signed.pdf

Number of isolated areas nationwide: The government has identified geographically isolated and disadvantaged areas (GIDA) nationwide. This refers to communities with marginalized populations that are physically and socio-economically separated from mainstream society and characterized by:

- physical factors (isolated due to distance, weather conditions, and transportation difficulties, such as island, upland, lowland, landlocked, hard-to-reach, and unserved/underserved communities); and
- 2. socio-economic factors (high poverty incidence, presence of vulnerable sector, communities in or recovering from situations of crisis or armed conflict).

There are 10,875 GIDA barangays nationwide, representing 27.36% of all barangays. Regions V, VIII, and IX have the most GIDA barangays, representing a combined 31.23% of GIDA barangays. The data for all regions seem high, reflecting the slow pace of rural development (**Figure 2**). In this scenario, it is understandable that many areas still do not have even an elementary school. These are the places where the ALS may be most needed.

Table 4: Number of ALS Teachers by Operational Category, 2019		
DEPED-DELIVERED		
A. Mobile Teachers	4,984	
B. District ALS Coordinator (Full-time)	2,381	
C. District ALS Coordinator (Part-time)	107	
D. Education and Skills Training	12	
DEPED-PROCURED		
A. Literacy Volunteer	465	
B. Organization (Service Providers)	6	
C. BP-OSA	61	
D. Education and Skills Training	14	
PARTNER		
A. Individual	2,280	
B. Organization	134	
C. Education and Skills Training	3	
Grand Total	10,447	

ALS - Alternative Learning System,
BP-OSA - Balik Paaralan Para Sa Out-of-School Adult.

Availability of ALS teachers: There are many estimates of out-of-school youth and adults (OSYAs) in the country, and regardless of parameters, these estimates are always at the level of millions of individuals. In addition, there are school leavers every school year. Because each ALS teacher is required to have 75 learners per year, the total available 10,447 teachers can only theoretically reach 783,525 learners per year (see **Table 4** for the distribution of the ALS teachers). At this rate, serving a considerable portion of potential beneficiaries will take many years. This strategy must be revisited by DepEd if it wants to equip all Filipino citizens with the tools for lifelong learning.

Table 5: List of Vulnerable Groups that may Benefit from the ALS Program						
Children in Conflict with the Law	Disadvantaged Muslim Learners	Persons Deprived of Liberty / Drug Reformees				
• Child Laborers	• Females and Males in Difficult Situations	Refugees / Undocumented Individuals				
Decommissioned Combatants / Rebel Returnees	• Individuals in Far-Flung Areas	Returning Overseas Filipino Workers / Other Working Individuals				
Disadvantaged Indigenous Peoples	• Learners with Disabilities	• Teenage Mothers / Parents				
Disadvantaged Learners Abroad	• Learners with Health Conditions	• Urban Poor / Street Children				

ALS - Alternative Learning System.

Vulnerable groups: Dropping out of school is a function of disadvantage compared to other students. However, this disadvantage has many forms and sometimes occur in multiple instances for some individuals. As a result, target beneficiaries of the ALS Program sometimes have specific needs that should be addressed for them to get the most out of the Program. **Table 5** is a list of vulnerable groups that are encountered by the ALS teachers while implementing the Program. More work needs to be done to ensure that these vulnerable groups are identified and benefit fully from the ALS.

Program Assessment – Quality and Relevance

Table 6: Functional Literacy Rate of Philippine Population (Aged 10-64) by Age Group and by Sex, 2013 and 2019

	2019						2013					
Age Group	Population 10 to 64 Years Old (in '000)			Functional Literacy Rate (in %)			Population 10 to 64 Years Old (in '000)			Functional Literacy Rate (in %)		
	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female
Philippines	79,748	40,513	39,235	91.6	90.2	92.9	69,438	35,155	34,283	90.3	88.7	92.0
10-14	10,741	5,526	5,215	86.0	84.3	87.8	9,823	5,063	4,760	83.2	81.3	85.2
15-19	10,349	5,284	5,065	95.0	93.9	96.1	9,593	4,898	4,695	93.7	91.9	95.6
20-24	9,740	4,972	4,768	96.0	95.1	96.9	8,856	4,487	4,369	95.1	93.3	97.0
25-29	8,995	4,604	4,392	94.7	93.5	96.0	7,737	3,909	3,828	93.8	92.4	95.2
30-39	15,476	7,889	7,587	93.5	91.9	95.2	13,124	6,646	6,478	91.5	89.4	93.5
40-49	12,114	6,139	5,975	90.7	89.4	92.0	10,463	5,293	5,170	89.3	87.7	90.8
50-59	9,060	4,519	4,541	86.7	84.8	88.7	7,404	3,687	3,717	87.5	86.7	88.3
60-64	3,273	1,580	1,693	84.8	84.2	85.3	2,439	1,172	1,267	83.6	82.5	84.7

Note: Data not available for Region VIII (Eastern Visayas) as FLEMMS 2013 was not conducted in the region due to typhoon Yolanda. Source: Government of the Philippines, Philippine Statistics Authority. 2019. Functional Literacy, Education and Mass Media Survey (FLEMMS). Manila. https://psa.gov.ph/content/functional-literacy-education-and-mass-media-survey-flemms

Older learners with lower educational attainment: As previously shown in **Table 1**, 76% of ALS learners are in secondary level, meaning they are a few competencies away from completing an educational level equivalent to Grade 10 (JHS). These learners are also mostly aged 15 to 30, and are more likely to be interested in and will benefit more from participating in the Program. **Table 6** shows that the 40 to 64 age groups have relatively lower levels of functional literacy compared to the younger generations, and this will be a hindrance in terms of accessing education programs in a blended learning setting. Therefore, an increased level of effort and resources dedicated to reaching basic literacy and elementary-level learners in the ALS is worth exploring.

Table 7: Distribution of Philippine Population (Aged 10−64) by Level of Literacy, by Sex, and by Highest Educational Attainment, 2019 (%)							9 (%)	
			Level of Literacy					
	Level 0	Level 1	Level 2	Level 3	Level 4	Undetermined	- C - L	
Sex and Highest Educational Attainment	Cannot read and write	Can read and write	Can read, write, and compute	Can read, write, compute, and comprehend	At least junior high school completer/ high school graduate	Undetermined	Functional Literacy Rate	
Philippines	3.6	2.7	13.8	24.3	53.4	2.2	91.6	
Sex								
Male	4.4	2.8	15.2	24.9	50.1	2.6	90.2	
Female	2.7	2.6	12.4	23.7	56.8	1.8	92.9	
Highest Educational Attainment								
No grade completed/Early Childhood Education	93.6	1.6	1.5	1.1	-	2.2	2.7	
Elementary level	12.3	8.0	28.3	43.6	-	7.8	71.9	
Elementary graduate	2.6	6.6	33.3	52.4	-	5.2	85.7	
Junior high school level	0.9	4.0	30.7	62.1	-	2.3	92.8	
Junior high school completer or higher	-	-	-	-	100.0	-	100.0	

Source: Government of the Philippines, Philippine Statistics Authority. 2019. Functional Literacy, Education and Mass Media Survey. Manila. https://psa.gov.ph/content/functional-literacy-education-and-mass-media-survey-flemms

Low literacy level among OSYAs: In terms of level of literacy, Table 7 shows that 36% of Filipinos who reached JHS as their highest educational attainment still cannot read, write, compute, and comprehend at varying levels. These individuals can benefit from undertaking the ALS Program if they are having difficulty completing their formal schooling. For the younger ones in this age group, undertaking the ALS Program can still help them progress to higher levels of formal education, training, or employment. For the older ones in this age group, undertaking the Program will help them find employment, thus also help them support the learning of the schoolgoing children and youth in their households.

One issue identified with the ALS Program is the difficulty in administering an honest-to-goodness Recognition of Prior Learning. There are many assessment forms being used by the ALS teachers to determine the level of the learners before they start with the Program. They noted that human intervention (that is, subjectivity in the assessment process or sensitivity to the circumstances of the learner) plays a big part in the erroneous assessment and levelling of the learners. Some are wrongly placed in higher levels due to humanitarian considerations, which creates various learning challenges later in the Program.

Table 8: Typology of Community Learning Centers					
CLC Type	Description				
Type 1	A simple, temporary meeting place with tables and chairs, or any open multipurpose area or any private property temporarily lent for learning purposes.				
Type 2	A semi-permanent structure made mostly out of light materials (e.g., nipa, softwood) and equipped with basic furniture and learning equipment, which is dedicated to the ALS learning sessions and related activities.				
Type 3	A typical barangay learning center, permanent and secured, mostly made of cement and other heavy building materials, and equipped with basic furniture and learning equipment, which is dedicated to the ALS learning sessions and related activities.				
Type 4	A two- or three-story building fully equipped with basic furniture and advanced ICTs for learning (e.g., computers), which is dedicated to the ALS learning sessions and related activities.				
Type 5	A permanent building equipped with the ALS and other learning materials, utilized by learners and other members of the community, and functions as a resource center where materials are either transported from house to house or borrowed by interested community members.				

CLC - Community Learning Center.

Community Learning Centers (CLCs): There are five types of CLCs based on quality of construction and facilities (Table 8). The most common ones are Types 1 and 2 as these are cheaper and easier to set up. There is no official count on the number of official CLCs nationwide. This is because the ALS teachers are mobile and they set up impromptu CLCs wherever they hold learning sessions. However, given the curriculum reform and the requirements for the competencies to be covered and taught properly, upgraded CLCs are becoming increasingly important. In addition, the World Bank found that learning sessions conducted in Type 5 CLCs exhibit a 19 percentage point increase in the completion of the Program.⁵ To improve the current situation, DepEd must first know how many and in what state CLCs are throughout the country. After this, a logical upgrading plan should be implemented to provide improvements in CLCs in a more efficient, effective, and equitable manner.

Learning sessions: The new ALS 2.0 curriculum is aligned with the DepEd K to 12 curriculum, and it includes a comparable number of competencies for learners aiming to complete Grade 10. An ALS Senior High School curriculum is being finalized as well. One major difference between the old and new ALS curricula

is the introduction of Learning Strand 6 on Information and Communications Technology. Another major difference is the significant increase in the number of competencies that need to be covered by an individual that aims to achieve JHS completion. All these curricular improvements require better teaching practices and learning environments for all learners.

Learning materials: The main materials used in the ALS Program are the printed modules that were produced more than two decades ago, which only cover some of the competencies in the current curriculum. A few modules were added over the past years, but there has not been a major effort in developing updated learning materials. There has also been limited implementation of radio-based instruction and use of television and recorded videos for learning sessions. The Program has also piloted computer-based and online learning modalities in selected sites. Notably, the COVID-19 pandemic has hastened the development of more non-print materials and the provision of financial support for printing old and new modules, yet these are still not enough. This situation needs to be addressed since the reliance on paper is not sustainable nor desirable in the long run from both an environment and education perspective.

ALS 2.0 ICT Strategic Plan 2022-2026

⁵ World Bank. 2018. A second chance to develop the human capital of out-of-school youth and adults: The Philippines Alternative Learning System. Philippines Education Note. No. 1. Open Knowledge Repository. https://openknowledge.worldbank.org/handle/10986/30064

Informal education: Informal education connotes the teaching of various skills that are useful for the learners. It is unclear how many ALS teachers have conducted this sub-program in the past, but when they do, they almost always use their personal money. Informal education is particularly important in reducing the opportunity costs that usually discourage potential learners from enrolling in the Program. There are now plans to implement informal education more systematically, including providing official funds for it. Some of these programs can benefit from ICT through the availability of resources and experts, and use of some technologies for income-generating activities.

Portfolio assessment: The ALS 2.0 is strengthening the use of portfolio assessment in learning sessions and certification exams. This is envisioned to be a fairer assessment mix, rather than relying solely on written works and tests. However, portfolio assessment requires significant preparation to be effective since DepEd has not embarked on the implementation of this policy on such a massive scale in the past. ICT has a significant role to play in this aspect of the Program.

Certification: The most significant benefits from undergoing the ALS Program accrue only after passing the A&E Test, as this signals the ability to move on to the next stages of education, training, or employment. In the past, the test confers a high school diploma to its passers; after the curriculum reform, it confers Grade 10 completion instead. There are many issues surrounding the test

though, especially the usual delays in its administration. The A&E Test has been conducted once a year traditionally, but there have been years that no test was conducted because of procurement issues and, more recently, the COVID-19 pandemic. This is another aspect of the Program that can benefit from ICT if the reforms are designed properly.

Post-program support: In the past, there had been minimal investment on providing support services to learners after they complete the Program. This dampens their ability to proceed to the next stage of education or employment since many of them cannot easily shake off their initial mindset and position of disadvantage. Plans to provide support services are now underway with the help of development partners. Again, ICT can play a major part in this new endeavor.

Capability building: DepEd has been implementing the ALS Program for over two decades. The Program, though, still requires considerable capability building for all its stakeholders. For example, teachers who traditionally teach an entire curriculum by themselves require more training on subjects and competencies they are not experts in. The situation is the same for non-DepEd ALS partners, who are seldom included in the training programs for the ALS teachers, even if they are authorized by DepEd to implement the ALS Program in some areas. Even Program managers, from the Central Office down to the Division Offices, require various kinds of training to help them manage the Program better. Lastly, non-ALS DepEd employees also require a reorientation on the Program to reduce misconceptions on the ALS that still exist within DepEd.

A survey conducted by the Opportunity 2.0 project on Learning Needs Analysis of the ALS teachers in selected divisions shows that massive capability building is needed as teachers are not sufficiently confident in six out of seven domains identified in the Philippine Professional Standards for Teachers (PPST). The only domain they exhibit confidence in is on Personal Growth and Professional Development. The domains with the lowest self-ratings are Curriculum and Planning, Content Knowledge and Pedagogy, and Assessment and Reporting.⁶

ICT preferred by learners: The COVID-19 pandemic tested the design of the ALS Program in terms of its flexibility and accessibility. Likewise, all the modalities that the Program had been implementing in niches for the past decade were also tested for appropriateness of use for the general population. On both counts, the Program did not perform as well as expected. First, enrollment during the pandemic academic year (SY 2020-2021) was significantly lower than the year before. For a program that was supposed to be within reach of people with certain disadvantages, even the ALS Program was deeply affected by the uncertainty brought about by the virus and the lockdowns. Second, **Table 9** shows that print is the only viable learning modality even during a pandemic. Notably, the use of computers, laptops, tablets, and mobile phones were significantly preferred by learners over television (TV) and radio. Many also preferred using Facebook Messenger, and some even developed their own Learning Management Systems. This variation in ICT preferences and practices nationwide points to a long road ahead in terms of transitioning from predominantly print materials to other forms of technology.

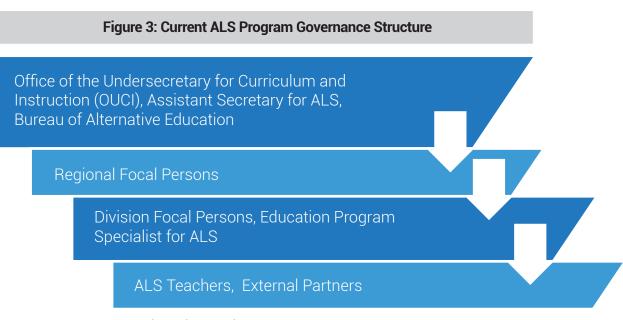
Table 9: ALS Program Enrollment by Mode of Instruction, 2020						
Mode of Instruction	No. of Learners	% Share of Total				
Modular Print	293,086	82.93%				
Modular Digital	3,766	1.07%				
Online	4,129	1.17%				
Educational TV	24	0.01%				
Radio-based Instruction	1,294	0.37%				
Homeschooling	1,460	0.41%				
Blended	49,658	14.05%				
Total	353,417	100.00%				

ALS - Alternative Learning System, LIS – Learner Information System, TV – Television. Source: DepEd Planning Service , LIS Dashboard.

⁶ United States Agency for International Development. Opportunity 2.0: LNA Results and Capacity Building Programs. Presentation.

Program Assessment – Governance and Financing

Governance structure: Given the significant number of Filipinos who can conceivably benefit from the Program, there are not enough ALS teachers to reach target beneficiaries (this is supported by the discussion on availability of ALS teachers in Subsection 2.2.1). There also seem to be a difficulty at the regional and division levels to manage all aspects of the Program properly because of lack of personnel. This issue is expected to be addressed by the upcoming Bureau of Alternative Education (BAE), the establishment of which has been mandated by the ALS Act (see Figure 3 for current ALS Governance Structure).



ALS - Alternative Learning System.

Management information systems (MISs): Like all major DepEd programs, the ALS Program relies on centralized data collection from the Learner Information System (LIS) and the Basic Education Information System (BEIS). It is also included in other databases like the Human Resource Information System (HRIS) and the Training and Development Information System (TDIS), among others. These databases are gradually improving, and the ALS managers are slowly but surely becoming satisfied with the coverage of the Program within these databases. However, there are certain Program aspects that require further data collection, and there are currently no databases that capture these. Figure 4 lists all the needed databases that do not exist yet, or if they do, do not cover all needed information. The BAE is planning to develop some, if not all, of these. As more are being expected from the ALS, it requires a more comprehensive MIS that can help managers make informed decisions on various aspects of the Program.

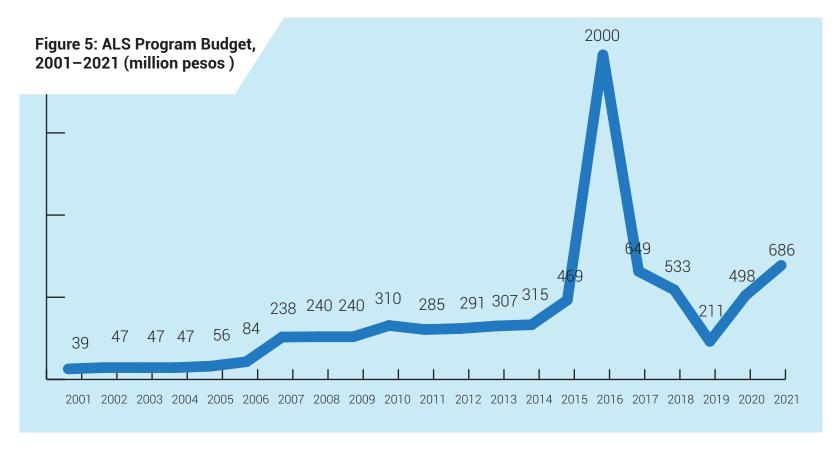
In addition, all the new data collection and information gathering will only produce significant gains if these are utilized properly and are maximized. There are numerous ICT-related tools that can help in this aspect, but it is critical that the ALS implementers at all governance structures are capable of better data management and analysis.



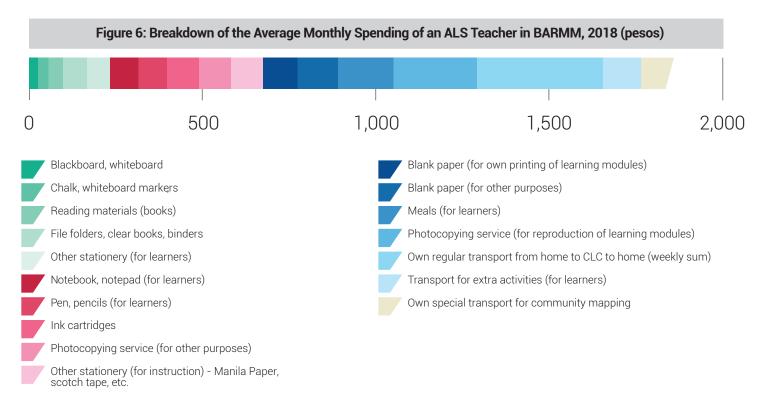
ALS - Alternative Learning System, CLC - Community Learning Center.

System diagnostics: In addition to the MIS, the ALS needs to address its limited capabilities on performance management, instructional supervision, progress monitoring, and program evaluation. First, there has been discontent about the design and system-wide understanding of the measurement of performance for the ALS implementers under the PPST. Second, there are no standards regarding instructional supervision and the conduct of monitoring activities by various officials in CLCs. Third, because of all of these and despite frequent monitoring visits, it is unclear what data are collected, what technical assistance are provided, and what decisions are made. Lastly, many ALS programs can be traced back to the Asian Development Bank-funded Nonformal Education Project in the mid-1990s; these programs are being implemented without rigorous evaluations for effectiveness and impact. All these aspects of system diagnostics should thus feed into policymaking and continuous program improvement.





Budget: The ALS Program has benefited from gradual increases in budget from 2001 to 2015 (**Figure 5**). There was a major infusion of funds in 2016 due to the piloting of the Abot-Alam Program. However, this was discontinued the following year, and a mix of poor spending and varying priorities led to significant decreases in the budget from 2017 to 2019. The years 2020 and 2021 saw recoveries in budgets due to renewed support for the Program and the passage of the ALS Act. The current budget, however, still falls short of the requirements to implement all reforms identified in the ALS Version 2.0 Strategic Roadmap.



Source: World Bank. 2019, November 27. *Unlocking the Potential of the Bangsamoro People through the Alternative Learning System.* https://www.worldbank.org/en/country/philippines/publication/unlocking-the-potential-of-the-bangsamoro-people-through-the-alternative-learning-system

Teachers spending personal money: On a more specific level, the ALS Program budget is perennially insufficient to provide the ALS teachers with appropriate financial support to conduct day-to-day operations. In a 2019 study, the World Bank found that teachers in the Bangsamoro Autonomous Region in Muslim Mindanao have been spending an amount equivalent to roughly 200% of the allowances they receive (**Figure 6**). Fortunately, there are already mandates and plans to harmonize all financial assistance to address this concern.

SWOT Analysis

Subsection 9.1 discusses the environment scan conducted during the preparation of this Strategic Plan. It outlines the key factors (political, economic, social, technological, environmental, and legal) that influence the Program. Meanwhile, subsections 2.1 and 2.2 summarized the status of the ALS Program to complete the information needed for a concise SWOT analysis.

Figure 7 shows a summary of the perceived strengths, weaknesses, opportunities, and threats of the ALS Program. The strengths revolve around its program design, human resources, and potential increase in available resources. Many weaknesses were identified, which revolve around the challenges in implementing various service delivery standards. Fortunately, there are many external factors that can help improve program implementation, if utilized and maximized properly. Lastly, the threats to Program are largely general factors that plague any developing country's education system.

Delving deeper into the SWOT factors yields more insights for the Program. First, a key interaction in the Strength-Opportunity category is the one between expected additional resources, political support for the ALS Program, and improving costs and functionalities of technologies. This interplay of factors will cause improvements in access to various ICTs for the Program over the Strategic Plan timeline through more affordable and better-designed ICT interventions.

Figure 7: Strengths, Weaknesses, Opportunities, and Threats (SWOT) Diagram of the ALS Program

STRENGTHS

- Program flexibility
- Dedicated / multi-talented staff
- Expected additional resources
- Improvements in A&E Test results

WEAKNESSES

- Weak reputation
- Limited reach / Investment
- Limited ability to track dropouts
- Low CLC readiness for new curriculum and for ICT
- Teacher readiness for ICT / delivering JHS-level curriculum
- Weak governance structure
- Lack of culture of continuous improvement

OPPORTUNITIES

- Political support for the ALS (national and local)
- Government focus on OSYAs
- Improving technologies (in cost and functionality)
- Many non-DepEd providers and stakeholders

THREATS

- Poverty, inflation and the need to work
- Low access to gadgets and internet
- Natural and human-induced calamities, including COVID-19 and the like
- Peace and order
- Isolated / far-flung areas
- Increasing urban-rural migration

A&E – Accreditation and Equivalency, ALS – Alternative Learning System, CLC – Community Learning Center, DepEd – Department of Education, ICT – Information and Communications Technology, JHS – Junior High School, OSYAs – out-of-school youth and adults.

An important threat that needs attention is the negative economic outlook of the country in the short run, leading to increased pressures to prioritize employment even among school-aged children and youth. This is where the identified strength of program flexibility should come in—to provide relevant education options for these individuals despite their challenging life circumstances. This flexibility is also enhanced by the potential of ICT in program delivery. In the long run, these OSYAs will benefit more from completing the ALS Program, even if only through distance learning, rather than settling solely on potentially low-level employment.

The weakness of the Program regarding its limited reach nationwide can potentially be mitigated by the presence of many non-DepEd ALS providers and stakeholders. These institutions, agencies, organizations, and individuals are willing and able to implement the Program in its various modalities even without financial assistance from DepEd. As more pressures drive individuals away from completing their basic education, it is reassuring to note that DepEd does not have to locate and serve all of them by itself.

Lastly, DepEd should be on the lookout for the interaction of the Program's weaknesses with threats, like the interplay of the limited ability to track dropouts and the increasing pressure to prioritize employment over education. A situation wherein more individuals are leaving school coupled with the inability of DepEd to locate them and bring them back to school will be detrimental not just to the education system but to the country as a whole. Technology can play major roles in student retention and improving learner tracking if they exit the education system.

In summary, the ALS Program, like other education programs, have characteristics that enable and hinder its performance. Some of these are systemic in nature and require wider reforms in laws, policies, and program design. However, many of these factors may be supported and addressed by the addition of a strong ICT strategy. These factors shall be discussed in the succeeding subsections.

03 Vision, Mission, and Outcomes



Vision

"A future-ready ICT-enabled Alternative Learning System to complement 21st century, quality, accessible, relevant, and liberating education for all Filipino learners."

The vision for the ALS 2.0 ICT Strategic Plan is linked to the overall DepEd team vision. As a program within the Department, it is only right that ALS, as a program enhanced by ICT, work towards the same vision as the entire organization. This vision statement also runs parallel to the overall vision stated in the ALS Version 2.0 Strategic Roadmap. It articulates the supporting role that ICT plays in enabling the ALS Program to provide education for all Filipinos.

Mission

As a plan that supports the ALS Version 2.0 Strategic Roadmap, it is important to include the mission statement of the ALS Program. While ALS is currently viewed as a second-chance education program, it should not be second-class in terms of offerings and quality; it can play a bigger role especially in light of Industry 4.0.7

"To develop exemplary programs and open learning opportunities for OSYAs to achieve multiple competencies and skills for Industry 4.0."

Outcomes

The outcomes of the ALS 2.0 ICT Strategic Plan also correspond to the framework used in the ALS Version 2.0 Strategic Roadmap. The Strategic Plan reflects the traditional priorities of DepEd on Access, Quality, and Governance (Figure 8).

⁷ Government of the Philippines, Department of Education. 2020. *Alternative Learning System Version 2.0 Strategic Roadmap*. Manila. https://www.deped.gov.ph/wp-content/uploads/2020/07/02142020_als_roadmap_maroon.pdf

03 Vision, Mission, and Outcomes

Figure 8: Outcomes and Intermediate Outcomes of the ALS 2.0 ICT Strategic Plan 2022–2026						
Access and Equity Expanded	Quality and Relevance Improved	Governance, Management, and Financing Modernized				
Coverage of inclusion programs expanded.	K to 12 program implemented.	Core systems and processes automated.				
Access to Secondary Education expanded.	Quality of teachers improved.	Procurement processes improved.				
Partnership-building and linkages improved.	Use of technology for learning expanded.	Research and Development accelerated.				
	Learners' academic performance improved.	DepEd independence from interference strengthened.				
		Human Resource and Development enhanced.				

ALS – Alternative Learning System, DepEd – Department of Education, ICT – Information and Communications Technology, K to 12 – Kindergarten to Grade 12.

A main characteristic of the ALS 2.0 ICT Strategic Plan is that ICT is not treated as a panacea. The ALS is a complex program, and its challenges cannot all be solved by improving ICT. Care has been taken to identify key issues that will benefit significantly from improved ICT solutions, and those are the ones that shall be addressed in the Strategic Plan. Other issues not addressed in the Strategic Plan are solved by other ALS policies and plans like the ALS Act, its implementing rules and regulations, the ALS Version 2.0 Strategic Roadmap, and numerous Department Orders and Memorandums relevant to the concerns.

Outcome 1: Access and Equity Expanded

Given the situation that new OSYAs are added yearly to the already substantial number of OSYAs in the population, the ALS Program needs to expand significantly over the next few years to cover the greatest number of potential learners as quickly as possible. The best way to achieve this is to have more implementers in more locations nationwide.

ICT can play a major role in extending the reach of the Program, sometimes even without additional staffing requirements. It will also allow various kinds of learners to participate in the Program in a manner that is best suited to their needs and personalities. It can help keep many of these learners in the Program, even if they face significant opportunity costs to their time.



Intermediate Outcome 1.1: Coverage of Inclusion Programs Expanded

By definition, the ALS Program caters to individuals and groups that encountered challenges in completing their formal basic education. There are many reasons for individuals to drop out of school and not complete their basic education. The biggest challenge of the ALS on this matter is the identification of these individuals and groups in a systematic manner, and not just relying on those who voluntarily sign up for the Program. The ALS teachers have been exerting substantial effort and resources on this exercise for over 20 years, but recent developments in ICT like the existence of government databases and the ubiquity of communication tools can considerably improve the effectiveness and efficiency of the Program.

The key outputs are:

1. ALS literacy mapping improved: ALS Program implementers have a vague idea of how many OSYAs are there nationwide, but they will not be able to locate these individuals without going to the communities. This is inefficient because government, both at national and local levels, has various databases that can aid the Program in locating and inviting potential learners, especially those who do not normally volunteer for such programs due to challenging circumstances. Under this Strategic Plan, the ALS shall maximize existing information and technologies to improve its mapping activities. Through this, it is possible to make physical visits to potential learners the last option, as these are very expensive and time-consuming.

In addition, despite decades of operations, the ALS Program is understood and valued by different stakeholders in various ways. Recently, DepEd has redefined the Program into something that is considerably different from its previous version. A comprehensive Communication Plan that is supported by ICT will help provide the context and information that can help form the foundation for better understanding of the Program, as well as widen its reach moving forward.

2. Inclusion dimensions of the ALS intensified: The ALS teachers are usually Elementary or Secondary Education bachelor degree holders. They generally do not have the expertise to provide contextualized education services for some vulnerable groups like persons with disabilities, indigenous peoples, and others. With the help of technology, the ALS teachers shall be capacitated to provide appropriate interventions to various disadvantaged groups, in line with the mandate of the ALS Act. In addition, a referral system shall be established to ensure that more challenging cases are referred to the appropriate experts effectively and efficiently.

Intermediate Outcome 1.2: Access to Secondary Education Expanded

After the ALS teachers and non-DepEd ALS providers locate and enroll the learners, it is important to provide multiple options for them to participate in the Program. Even before the pandemic, regular attendance to learning sessions have been challenging, especially for learners that have other responsibilities or opportunity costs. However, a silver lining of the pandemic has been proving that certain forms of blended learning may be feasible in specific contexts and conditions. It is important to build upon this experience and incorporate effective components into the ALS Program moving forward.

The key outputs are:

- 1. A&E program improved: A major motivation to undergo the ALS Program is to obtain official credentials that may be used to participate in the next stage of professional development. Cognizant of the intrinsic value of the credentials provided by the Program, DepEd has strengthened its portfolio assessment as well as the preparations and conduct of the A&E Test. However, there is still significant room for improvement in these programs, especially regarding effectiveness and automation. ICT can play a key role in making the conduct of this test more frequent, secure, and accessible to Program completers. The Bureau of Education Assessment already has initial plans to offer computer-based A&E tests, but more can be done to make the test more accessible to ALS learners, which in turn will increase the interest of other potential beneficiaries in joining the Program.
- 2. Online ICT-supported delivery of the ALS Program implemented: While majority of learners preferred the use of printed modules as the main mode of learning during the pandemic, this did not prevent them from benefiting from other forms of ICT during the teaching-learning process. Under this output, multiple ICTs shall be used in program delivery to ensure access to the ALS Program even if physical presence in learning sessions are not possible. This output is mainly relevant during pandemics or other program disruptions, but may also pertain to certain days or instances that learners simply cannot attend learning sessions. Having other options to connect with the ALS teachers will ensure that they are always engaged by the Program.

Intermediate Outcome 1.3: Partnership-building and Linkages Improved

The ALS Program enrollment needs to be increased, but bigger class sizes of learning sessions is not recommended as this reduces the focus on the individual needs of learners. If DepEd resources do not allow hiring of the ALS teachers at the pace required to cover the large numbers of OSYAs in the population, more partners and other stakeholders can come in and augment the overall resources for the Program. The existence and passion of non-DepEd ALS providers are recognized as one of the major opportunities for the Program, and proper management of these partners can produce significant benefits for the learners.

The key outputs are:

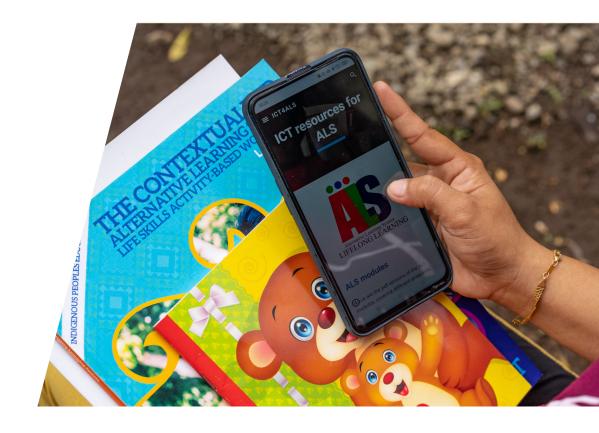
- 1. More non-DepEd ALS providers engaged: Traditionally, external ALS providers specialize in offering the face-to-face version of the Program. The pandemic has shown that the modality is almost as important as program content. There are other stakeholders that specialize in the ICT solutions that can help reach more learners, but do not have the expertise in implementing the ALS Program per se. Tapping these kinds of organizations can be useful in expanding the Program.
- 2. Capacity building for ALS stakeholders intensified: Non-traditional ALS providers require considerable capacity building on the details of the Program. In addition, existing ALS partners will benefit from updates in terms of the ALS 2.0 implementation. These orientation and training programs may be supported by ICTs, as proven during the pandemic. One important topic to be covered during these activities is capacity building on the use of various ICTs in offering the ALS Program to as many potential learners as possible, without sacrificing the flexibility and quality of the Program.

Outcome 2: Quality and Relevance Improved

The passing rates for the A&E Test indicate that there is still a significant portion of the curriculum that learners fail to grasp even if they complete the Program. This is the source of the perception that the ALS learners do not learn the same or are not comparable to Grade 10 graduates from formal schools. This situation is expected to worsen, all things being the same, once the ALS Senior High School program becomes institutionalized, because the subject matter covered at that level is even more challenging.

It is also important to ensure that vulnerable individuals and groups learn at least at the same pace as the average ALS learner. Aside from experiencing challenges in staying in the Program, disadvantaged learners might also be suffering from other barriers to learning. Innovative strategies aided by technology shall be implemented to ensure that these learners are not left behind.

In addition to improved teaching practices and environments, ICT will play a critical role in improving the quality and relevance of the ALS. It supplements available teaching resources, and reinforces the way lessons and competencies are learned. Under this component of the Strategic Plan, ICT will be used to make the teaching-learning process more effective.



Intermediate Outcome 2.1: K to 12 Program Implemented

Many Strategic Plans include the review or reform of the curriculum among the priority actions. For this Strategic Plan, however, the core ALS K to 12 Basic Education Curriculum shall not be revised because it was only finalized in 2019. Instead, the Program will focus on ensuring that the intended curriculum translates properly into the implemented curriculum. ICT will help ensure that the standards and intentions of the curriculum are properly observed in the ALS Program. ICTs present a wide range of tools and techniques that can improve the experience of learners during the sessions. Traditional lectures often do not resonate with learners, but ICT-aided instruction usually does. For example, a well-designed learning log that maximizes available technologies in the learning center usually elicits better participation from learners.

In addition, a major advantage of ALS is that it can meet the individual learning needs of learners. In the past, this has been exceedingly difficult to implement properly as resources are scarce and the teacher had to be knowledgeable in all possible areas of interest to be effective. With recent developments in ICT, information and resources on countless possible interests are available. Also, personalized learning is more viable with the use of ICT. When partnered with active learning strategies and the continued guidance of teachers, these initiatives will help ensure that learners stay in the Program because they see it as a good use of their time and efforts.

The key outputs are:

1. Team teaching, especially in secondary level, implemented:

A major strategy to improve teaching in the ALS, which was identified in the ALS Version 2.0 Strategic Roadmap, is the utilization of team-teaching strategies. The ALS teachers are usually generalists and many of them are elementary education specialists. Teaching the secondary-level curriculum properly without capacity building and support from other experts will be particularly challenging. The team-teaching mechanism is being finalized, and ICT has a major role in ensuring that it is effective and efficient. Teachers implementing this scheme will no longer need to always spend significant amounts of time for travel to teach learners in other locations.

In addition, a key component in helping disadvantaged learners catch up to their peers is to address their unique learning challenges. These may be different learning styles, lack of time to focus on lessons, or issues with the family, among others. The ALS Program has various strategies to address some of these issues, but implementation is uneven nationwide. Another way to help disadvantaged learners catch up with their peers is to set realistic learning goals for them. The Individual Learning Agreement is a guided learning objective unique to the circumstances of every individual. It is not always defined by Program completion and achieving a Grade 10 certificate. Lastly, for those who plan to continue on to higher levels of education, it is important that they learn all the competencies relevant to their further education. ICT can assist in achieving all these objectives in a more efficient manner.

Intermediate Outcome 2.2: Quality of Teachers Improved

The need for regular capacity building for the ALS teachers is highlighted due to the introduction of the ALS 2.0, which is more aligned with the standards of the K to 12 curriculum. The number of total competencies of the entire ALS curriculum tripled under the new version of the Program. This implies that aside from the usual need for elementary education teachers to be trained on secondary school concepts, all ALS teachers now need regular training on the new competencies. ICT has a major role to play in this massive capacity building requirement.

The key outputs are:

1. Continuous and comprehensive ALS 2.0 training program implemented: The ALS Version 2.0 Strategic Roadmap sets out a comprehensive training program for all ALS teachers. This was conceptualized before the pandemic and had assumed mostly face-to-face training programs. However, recent experience has shown that remote training sessions are also workable, if designed and supported properly. The Strategic Plan will develop strategies to maximize existing technologies for the conduct of capacity-building activities. One way to achieve this is to provide a learning management system, which will contain all the courseware and other materials needed for training on various topics. It may also be the repository of references used and outputs produced during training. Lastly, it may serve as the clearinghouse for the needs and availability of various training topics.

Over the years, DepEd has continuously improved the quality assurance of the training provided to various personnel nationwide. The ALS Program has benefited from these improvements through the observance of the standards of the original training designs and the expertise of the field officials implementing the standards. This system can be further improved with the strategic use of technology whenever possible, while making sure that the original intentions of the programs are preserved.

Intermediate Outcome 2.3: Use of Technology for Learning Expanded

One benefit from ICT is its "shock and awe" value. New technologies never fail to capture the interest and imagination of individuals. It is the intention of this Strategic Plan to maximize this benefit through provision and utilization of these technologies by the learners. During the pandemic, students who received or were able to borrow gadgets from the government had more access to blended learning programs. The same shall be targeted for the ALS: provision of gadgets to learners will be done to increase their access to and interest in the Program.

The key outputs are:

- 1. Online DepEd platforms made more useful for teachers: Since its inception, the ALS Program has relied on multiple kinds of resources to conduct learning sessions. The pandemic has highlighted the need for these resources to help ensure access to basic education. As a response, DepEd has strengthened and developed various platforms to deliver basic education, such as the Learning Resources Management and Development System (LRMDS), DepEd Commons, ALS TV, ICT4ALS, and other DepEd ICT resources. This Strategic Plan output shall support further improvements to these platforms and ensure that the ALS learners benefit from these.
- 2. Qualified CLCs equipped with necessary equipment for effective service delivery: Better resources are needed so that the new ALS curriculum may be taught properly. Until recently, provision of specialized equipment and materials to CLCs has been extremely limited. The ALS Version 2.0 Strategic Roadmap even specified the need to provide Science, Math, Technical-Vocational (Tec-Voc) and other ICT equipment to qualified CLCs. With the new mandate to improve CLCs, the falling costs of equipment, and the renewed push to improve the ALS Program, the Strategic Plan will support the Roadmap objective of making these specialized equipment more accessible in CLCs. These include ICTs that can be used to help implement TVET, Entrepreneurship, and Life Skills programs.

Intermediate Outcome 2.4: Learners' Academic Performance Improved

One major reason for dropping out of formal school is "lack of personal interest" in education, in general, and in some specific topics. The ALS Program is not exempted from this problem. OSYAs have more opportunity costs, and keeping their attention and interest in the ALS is a difficult task. The ALS teachers often use personal money to conduct feeding programs or offer livelihood programs just to keep learners interested and engaged in the Program. Aside from operational improvements to address these concerns, ICT can play a critical role in ensuring that the interest of learners is sustained, thus increasing the probability that they will stay and learn from the Program.

The key outputs are:

- 1. Curricula enriched to address cross-cutting issues and foster critical thinking towards liberating Basic Education: The new ALS curriculum requires new teacher and learner materials so that the learning objectives are translated into suitable content and modules for use during learning sessions. These materials should also be developed with the additional intention of digitalization, so that these can adapt to the various technologies that they will be distributed in. After the core activity of developing teacher and learning materials, these documents shall be converted into materials that are suitable for any delivery modality that may be selected by the learners
- 2. Training on Tec-Voc, Entrepreneurial, and Life Skills provided, where appropriate: A major characteristic of the ALS 2.0 is the additional focus on non-academic programs that improve the learners' chances for success in their lives. Aside from academic lessons, the ALS learners are now provided with socio-emotional support, practical credentials, and activities to improve entrepreneurship and employment opportunities. All these programs will make their ALS education more relevant and useful after completion. In addition, ICT can help ensure that these programs are implemented efficiently and effectively through platform tie-ups with local government units (LGU) or national government agency training providers, access to industry experts and mentors, among others.

Education, though, should also be fun. Similar to students in formal schools, the ALS learners have different reasons for looking forward to going to school. Some of these reasons are related to program offerings that are not always strictly academic in nature, but instead relate to the learner's interests and hobbies. Under the Strategic Plan, special, co- and extracurricular programs usually implemented only in formal schools shall gradually be made available to the ALS learners to improve their overall experience in the Program. These shall be aided by ICT so that the introduction of the new programs is more efficient.

3. ALS-specific Post Program Support System institutionalized: In recent years, the ALS Program, with support from numerous external partners, have been piloting projects and activities that aim to help the ALS learners maximize the various options after the K to 12 program: education, entrepreneurship, employment, and training. Part of the initial successes of these pilots are leveraging broad-based support and improving technologies like ICT-supported databases and remote support mechanisms (e.g., online career guidance sessions or webinars, online job-matching competency assessments, remote access to expert resource persons for entrepreneurship, among others). The Strategic Plan aims to build upon these good practices to open up the ALS learners to expanded opportunities for a brighter future after completing the Program.



Outcome 3: Governance, Management, and Financing Modernized

Despite its status as a priority program of DepEd, the ALS Program encounters numerous implementation issues. Over the past few years, the Program has been managed by a Task Force with high motivation but limited human resources. The Program has also suffered from fluctuating budget allocations, making multi-year planning difficult. Lastly, the COVID-19 pandemic placed additional pressure on the ALS in terms of learning continuity despite the lack of mobility and unavailability of internet and gadgets among learners.

Unlike the first two components of the Strategic Plan, this third component cannot benefit much from technologies in the lower part of the spectrum. This is because the use of TV and radio for governance is now limited. This component relies on higher-level technologies like full-blown information systems, internet connectivity, and availability of gadgets to be successful. Under this component, ICT will be maximized to make program management more effective and efficient.



Intermediate Outcome 3.1: Core Systems and Processes Automated

The situational analysis of the Strategic Plan has identified key databases and information systems that should ideally be accessible to ALS Program managers. All these databases can work together to provide insight on all kinds of decisions regarding program design and implementation. This Strategic Plan will maximize latest software and hardware developments to collect data efficiently and to manage information systems effectively and securely.

The key outputs are:

1. Databases related to the ALS improved: A major difficulty identified during the situational analysis is storing digital copies of learners' portfolio and records. Most of these are on paper or in other physical forms. Since CLCs usually have limited space for storage, these outputs are either given back to learners or stored in alternative ways. The development of a digital portfolio to retain official copies of these outputs will be a major support for teachers and learners. In the same manner, the various official documents generated over the course of the Program can be stored digitally through this or a similar platform.

The professional development system described in Outcome 2 shall also be used by the ALS supervisors and officials. Guided by the PPST and the Results-based Performance Management System (RPMS), the system shall identify appropriate topics, deliver canned and online training programs, serve as repositories for all training materials, and reinforce the performance management system for the ALS.

Lastly, the ALS is a centrally managed program in that aside from teacher salaries, most of the project funds are disbursed from the Central Office to the field offices. Some of the funds managed this way are allowances, program support funds, and other funds for specific purposes. There are observed issues regarding this overall process, despite the existence of various government-created computerized systems. Under this Strategic Plan, DepEd will further analyze this situation and help improve these systems for the operations of the ALS.

2. Monitoring and evaluation practices improved: The pandemic has demonstrated that monitoring and supervision do not always need to be done face-to-face. This model shall continue to be used in the ALS in conjunction with properly timed physical visits. ICT shall be maximized to help ensure that more ALS teachers are monitored, thereby increasing the reach of technical assistance nationwide. ICT can also help synthesize information in the form of reports, data, videos, tools, or dashboards for more effective quality assurance.

A large part of the governance of the ALS happens at the field level. The ALS teachers look forward to the monitoring visits and the technical assistance provided by field supervisors. In general, more monitoring activities are desired, but continuous upskilling of the officials is also needed. While the ALS teachers are benefiting from a more comprehensive and ICT-enabled professional development program, the ALS officials will also undergo a similar process to improve their capability to provide technical assistance and quality assurance.

Intermediate Outcome 3.2: Procurement Processes Improved

Procurement is a major issue in any bureaucracy. This usually has specific steps and timelines that end-users have no control over. However, there are still steps that may be taken to reduce lag times and unnecessary repetitions in the process. Improved procurement processes may be achieved by having better information and observing proper program management procedures.

The key output is:

1. Better internal planning conducted to improve procurement timelines: Program Guidelines issued from the Central Office are required before the accompanying budget may be used by the intended implementers. These guidelines vary from year to year, so they need to be conceptualized and finalized regularly. In addition, procurement templates require accurate information on specifications, prices, and other aspects, all of which can be gathered more efficiently with the help of technology. Taken together, these two challenges can make or break the absorptive capacity of the ALS, regardless of the size of the budget. Under this Strategic Plan, DepEd will further analyze this situation and implement solutions that can reduce delays in this process, including having a functional dashboard that can make compliance with procurement processes easier.

Intermediate Outcome 3.3: Research and Development Accelerated

Simultaneous priorities and numerous daily concerns take up most of the time of the ALS Program management. As a result, there is not enough introspection and ideation being done by Program managers. This has hindered the continuous development of the Program and has delayed significant advances in Program improvement. While such activities are usually labor-intensive, ICT can assist in the production of the evaluations and experiments in support of continuous improvement of the Program.

The key outputs are:

- 1. Tracer studies on ALS learners conducted: Meeting the objectives of the ALS helps justify continued and increased investments in the Program. However, rigorous evaluations of the Program are rare, leaving a gap in the knowledge regarding the costs and benefits of the Program. This may be addressed by conducting impact evaluation and graduate tracer studies, and ICT can be a useful tool for these activities. For one, ICT can help in the data collection and analysis aspects of these activities.
- 2. Feasibility studies on forward-looking program dimensions conducted: Despite having a five-year cycle, the Strategic Plan considers the future of the Program. In the environment scan described in Subsection 9.2.3, new innovations and technologies are currently bringing benefits to other parts of the world while the Philippines is still trying to catch up with these developments. It is important to conduct rigorous experimentation and feasibility studies on these innovations before being implemented nationwide. Also, attention needs to be directed to some emerging technologies like artificial intelligence technology, blockchain, and micro-certification in preparation for their possible benefits to the Program.

Intermediate Outcome 3.4: DepEd Independence from Interference Strengthened

DepEd has received a major boost in the management of the ALS Program through the mandates of the ALS Act. This ensures that the Program is supported by a full-fledged bureau—the BAE—with regular resources for implementation. However, there remains discontent from some stakeholders regarding the design, policies, and implementation of the Program. The Strategic Plan will help address this by supporting an external coordination framework where these issues are discussed and addressed under the concept of an ALS stakeholder alliance.

The key output is:

1. Coordination with ALS stakeholders improved through ICT: A major advantage of the ALS is the abundance of external partners ready to support the Program. However, much of the coordination between DepEd and its external partners happen bilaterally or in rare meetings and consultations. This is the reason why the Roadmap has identified the creation of a stakeholder framework as one of its priorities. ICT can play a major role in building a multi-stakeholder ALS community through closer coordination, sharing of information and resources, and the cultivation of a culture of openness and support.

Intermediate Outcome 3.5: Human Resource and Development Enhanced

The ALS teacher is the key resource that keeps the Program going. Aside from increasing their number and upgrading their skills, the Department needs to support the ALS teachers' professional fulfillment through commendations, promotions, and even monetary considerations. However, these motivational tools have been tainted by seemingly unfair performance evaluations and by the additional burden of undergoing the performance management process. The Strategic Plan aims to improve this situation with ICT.

The key outputs are:

1. Comprehensive and fair Performance Management System implemented: DepEd has set standards for teachers and other employees, and the Department utilizes the government's performance management system. The ALS implementers sometimes feel that these standards are not always advantageous to them and are requesting for more appropriate standards and indicators. In addition, automation of certain aspects of the performance management system will reduce the administrative burden of the ALS teachers, and maximize the use of performance ratings in guiding the provision of professional development opportunities.

> **Table 10** summarizes the Monitoring and Evaluation Framework for the Strategic Plan. It outlines the various levels of the Strategic Plan's Results Framework then identifies the key indicator and target per program. All indicators are at the Intermediate Outcome level, and their achievement will be dependent on the success of the relevant outputs under the Intermediate Outcomes. Achievement of the targets of each Intermediate Outcome will lead to the achievement of relevant Outcomes. Once all Outcomes are achieved, the Vision may be considered achieved as well.



	Table 10: Monitoring and Evaluation Framework for the ALS 2.0 ICT Strategic Plan 2022-2026									
	Outcomes	Indicators	2020-	2026 Target						
Level	Outputs	Activities	2021 Baseline							
Vision	A future-ready ICT-enabled Alternative Learning System to complement 21st century quality, accessible, relevant, and liberating education for all Filipino learners.									
Outcome 1		Access and Equity expanded								
Intermediate Outcome 1.1	Coverage of inclusion programs expanded	Total number of learners from vulnerable / disadvantaged groups								
Output 1.1.1	ALS literacy mapping improved	 Improve the ALS literacy mapping through ICT Conduct ICT-enabled advocacy and social mobilization activities 	TBD	TBD						
Output 1.1.2	Inclusion dimensions of the ALS intensified	Support inclusion dimension of the ALS through ICT								
Intermediate Outcome 1.2	Access to secondary education expanded	ALS enrollment		1						
Output 1.2.1	A&E Program improved	•Improve A&E Program through ICT	599,365	million per						
Output 1.2.2	Online delivery of the ALS implemented	Improve the blended learning modality of the ALS		year						
Intermediate Outcome 1.3	Partnership-building and linkages improved	Number of official agreements with non-DepEd ALS providers								
Output 1.3.1	Non-DepEd ALS providers engaged	Engage more ALS providers with ICT for education capabilities	TBD	TBD						
Output 1.3.2	Capacity building for ALS stakeholders intensified	Maximize ICT for capacity building of ALS stakeholders								

	Table 10: Monitoring and Evaluation I	Framework for the ALS 2.0 ICT Strategic Plan 2022–2026		
	Outcomes	Indicators	2020-	2026
Level	Outputs	Activities	2021 Baseline	Target
Vision		enabled Alternative Learning System to complement 21st centusible, relevant, and liberating education for all Filipino learners.	ry,	
Outcome 2		Quality and Relevance improved		
Intermediate Outcome 2.1	K to 12 program implemented	Percentage of teachers monitored implementing proper teaching strategies		
Output 2.1.1	Team teaching, especially in secondary level, implemented	Maximize ICT in the implementation of team teaching	TBD	90%
Intermediate Outcome 2.2	Quality of teachers improved	Percentage of teachers performing above average in proficiency tests and the PPST		
Output 2.2.1	Continuous and comprehensive ALS 2.0 training program implemented	 Maximize ICT in the continuous, comprehensive, and demand-driven ALS 2.0 Training Program for all implementers Maximize ICT in the quality assurance and monitoring of training programs at all levels 	TBD	90%
Intermediate Outcome 2.3	Use of technology for learning expanded	Percentage of learners accessing the ALS programs through blended learning modality		
Output 2.3.1	LRMDS made more useful for teachers	Improve content and usability of the LRMDS, DepEd Commons, ALS TV, ICT4ALS, and other DepEd ICT resources	14%	30%
Output 2.3.2	Qualified CLCs equipped with necessary equipment for effective service delivery	Improve provision and maximization of ICTs		
Intermediate Outcome 2.4	Learners' academic performance improved	Program completion as defined by ILAs		
Output 2.4.1	Curricula enriched to address cross- cutting issues and foster critical thinking towards liberating basic education	Content based on new curriculum are developed and digitized		
Output 2.4.2	Training on tec-voc, entrepreneurial, and life skills provided, where appropriate	 Maximize ICT for relevant and beneficial program offerings Implement special, co-, and extracurricular activities through ICT 	TBD	90%
Output 2.4.3	ALS-specific Post Program Support System institutionalized	Increase percentage of learners who completed post-program interventions		

	Table 10: Monitoring and Evaluation Fram	ework for the ALS 2.0 ICT Strategic Plan 2022-2026				
Level	Outcomes	Indicators	2020-2021	2026		
Outputs		Activities	Baseline	Target		
Vision	A future-ready ICT-enabled Alternative Learning System to complement 21st centur quality, accessible, relevant, and liberating education for all Filipino learners.					
Outcome 3	Governa	ance, Management, and Financing modernized				
Intermediate Outcome 3.1	Core systems and processes automated	ms and processes automated Percentage of supervisors monitored implementing proper instructional supervision				
Output 3.1.1	Databases related to the ALS enhanced	Improve portfolio and records management through ICT Improve availability of professional development LMS and other training materials Improve financial management system	TBD	90%		
Output 3.1.2	Monitoring and evaluation practices improved	Improve availability of professional development LMS and other training materials				
Intermediate Outcome 3.2	Procurement processes improved	Percentage achievement of physical and financial targets per WFP				
Output 3.2.1	Better internal planning conducted to improve procurement timelines	Maximize ICT for internal planning to improve release of guidelines and observance of procurement timelines	TBD	100%		
Intermediate Outcome 3.3	Research and development accelerated	Number of internally produced research and studies				
Output 3.3.1	Tracer studies on the ALS learners conducted	Maximize ICT in the conduct of tracer studies	0	2		
Output 3.3.2	Feasibility studies on forward-looking program dimensions conducted	Maximize ICT in the conduct of feasibility studies	Ü			
Intermediate Outcome 3.4	DepEd independence from interference strengthened	Establishment and operation of the ALS Stakeholder Alliance	0	1		
Output 3.4.1	External coordination framework / Stakeholder Alliance developed	Improve coordination with DepEd stakeholders through ICT	0			
Intermediate Outcome 3.5	Human resource and development enhanced	Professional satisfaction of the ALS teachers				
Output 3.5.1	Comprehensive and fair performance management system implemented	Implement an ICT-enhanced, comprehensive and fair performance management system	TBD	90%		

ALS – Alternative Learning System, CLC – Community Learning Center, DepEd – Department of Education, ICT – Information and Communications Technology, ILA – Individual Learning Agreement, K to 12 – Kindergarten to Grade 12, LRMDS – Learning Resources Management and Development System, PPST – Philippine Professional Standards for Teachers, TBD – To Be Determined, Tec-Voc – Technical-Vocation, WFP – Work and Financial Plan.

Since the Strategic Plan only covers a short period and many of the baseline information have yet to be ascertained, the Strategic Plan articulates only the end line target for the year 2026 and not the yearly targets. This will give DepEd the flexibility to identify the detailed activities and strategize appropriately regarding meeting the targets. The means of verification for the activity/output level are quite straightforward, but significant data collection will be required to implement and measure the contents of the Monitoring and Evaluation Framework. Ideally, all baseline data should be available by the end of 2022.



06

Implementation

Responsibility Centers

The main responsibility for the implementation of the Strategic Plan resides in the Bureau of Alternative Education (BAE). As of writing, the final organizational structure of the Bureau has not been defined yet, but the Director is the main official in charge of the implementation of the Strategic Plan, which complements the implementation of the ALS Act and the ALS Version 2.0 Strategic Roadmap. The appropriate number of Bureau officials and staff can and will be assigned to implement and monitor the Strategic Plan.

As a program under the Basic Education System of the country, the success of the ALS also hinges on the collaboration with other DepEd offices, bureaus, services, and units. The policy that will define the BAE within the DepEd Organizational Structure will also identify the relationships and required collaborations for the implementation of the Strategic Plan. While these linkages may be standard or common, proper implementation of the Strategic Plan requires focused attention on the entire DepEd organization for it to be successful.

Lastly, the support of external partners and stakeholders has been critical to the Program's performance over the decades. This network that helps implement the ALS Program is being constantly formed and redefined, and it is more important now than ever. The BAE will take the lead in strengthening these partnerships and collaborations to ensure that the network grows continuously over time.



Timing

The ALS 2.0 ICT Strategic Plan follows the pace of the implementation of the ALS Version 2.0 Strategic Roadmap. However, the timetable of the Roadmap was significantly affected by the pandemic: some interventions had to be postponed, while others had to be advanced very quickly. Overall, it is expected that the achievement of the objectives and targets of the Roadmap will be delayed, and it is estimated that the new end date of the Roadmap will coincide with the endpoint of the Strategic Plan in 2026. However, due to disruptions and challenges that arose from the pandemic, it is important to prioritize interventions that help the Program recover from the effects of the lack of face-to-face sessions.

Post-COVID-19 Priorities

The most critical intervention in 2022, assuming there is no resurgence of the effects of COVID-19, is Output 1.1.1, ALS Literacy Mapping improved. A significant number of potential ALS learners were not able to enroll in the Program, as evidenced by the decline in enrollment during 2020. The first order of business will be to locate these learners more effectively through the help of ICT so that they can resume their journey towards human capital development. In the process, the ALS implementers will also inevitably come across formal school students who have left school during the pandemic. The ALS implementers can help them return to school. Otherwise, these individuals may also be served by the ALS Program, if appropriate.

Another priority intervention is Output 1.3.1, Non-DepEd ALS Providers engaged, as this will significantly increase the reach of the Program even without hiring new teachers. Many organizations with expertise in both ALS and ICT may be tapped to conduct the Program in key areas nationwide to augment Program coverage. While there is a general situation that internet-based ALS delivery is very challenging in many locations in the country, there are specific forms of ICTs that are appropriate for various settings. The non-DepEd partners can come in and provide expertise in implementing the Program through these modalities.

Lastly, it is important to prioritize Output 2.2.1, Continuous and Comprehensive ALS 2.0 Training Program implemented, to ensure that teachers will be better equipped, not just for another pandemic, but also for the appropriate learning recovery strategies needed in the post-COVID-19 era. Almost all teachers encountered challenges in the implementation of blended learning during the pandemic, and many of these challenges are personal and professional, rather than technological. Not all teachers were immediately ready to adjust to the emerging learning needs of the learners during the pandemic. Worse, some teachers developed inappropriate teaching habits over this period, decreasing their effectiveness in delivering the Program. Updated and holistic training programs will help correct these issues.

06

Implementation

Yearly Priorities

The ALS Version 2.0 Strategic Roadmap has yearly targets for its various outputs, intermediate outcomes, and outcomes. In addition, the ALS 2.0 ICT Strategic Plan has an indicative timetable of the rollout of major interventions, as described in Chapter 7. As stated earlier, both documents have flexible implementation schedules but seem to have 2026 as a common endpoint. The BAE can decide on the yearly priorities of both plans and ensure that the sequencing of interventions is logical and optimal.



Risk Assessment

The overall risk assessment for the Strategic Plan is Medium. This is based on the Risk Management Plan, which is summarized in **Table 11**. The Risk Management Plan contains an assessment of risks based on the following criteria:

L = Likelihood of occurrence (1=Rare; 2=Unlikely; 3=Possible; 4=Likely; 5=Almost Certain).

C = Consequence of occurrence (1=Negligible; 2=Minor; 3=Moderate; 4=Major; 5=Severe).

R = Risk level, which is the combination of L and C (E=Extreme; H=High; M=Medium).

Table 11: Risk Management Plan for the ALS 2.0 ICT Strategic Plan 2022–2026										
Source of Risk	Risk Event	Ranking L C R							Risk Treatment	
Financial Risk										
Inadequate budget allocations are made by national government and LGUs to support the Strategic Plan.	Insufficient resources supplied by counterparts in support of the Strategic Plan. Inability or delays in achieving desired plan outputs and outcomes.	3	4	н	Intensify advocacy on importance of the ALS Program and the mandates provided by the ALS Act and other policy documents. Ensure adequate yearly budget for the BAE. Mobilize external partners to augment resources available to the Program.					

Table 11: Risk Management Plan for the ALS 2.0 ICT Strategic Plan 2022–2026									
Source of Risk	Risk Event	Ra	ankir C	ng R	Risk Treatment				
Institutional Risk									
Officials and staff from the BAE are not appointed or are too busy with regular duties to devote sufficient time to Program activities.	Lack of counterpart participation will undermine implementation and ownership of the Strategic Plan.	4	4	E	Conduct consultation and reach agreements to appoint appropriate organic counterparts; reduce the workloads of counterparts (and/or integrate the regular workload of organic counterparts into the system to eliminate conflict); and provide necessary contractual positions to ensure adequate level of availability and commitment for DepEd staff to participate in and contribute to plan implementation and management.				
A range of other DepEd priority activities compete for time of senior DepEd managers and Strategic Plan participants.	Strategic Plan participants and educational administrators focus on other DepEd priorities rather than requirements of the Strategic Plan implementation, causing delays in plan implementation.	3	4	н	Enjoin stakeholders responsible for managing and guiding implementation to contribute to Strategic Plan activities regarding adjusting to DepED priorities and acknowledging absorptive capacity of implementing divisions.				
Differences in the way that the Strategic Plan is understood, applied, and measured lead to a lack of shared commitment.	Inability to agree on Strategic Plan working objectives and activities; inability to fully implement processes and utilize plan progress monitoring data and analysis as feedback for change and adjustment of activities.	3	5	Н	Involve key stakeholders in the implementation and monitoring of the Strategic Plan. Conduct further workshops with stakeholders to enhance understanding and capacity to undertake the Strategic Plan. Strengthen capacity building in planning and managing effective plan progress.				
Agencies/ institutions are unable to continue initiatives after plan period. Strategic Plan activities not sustained or mainstreamed.	Sustainability of Program benefits is not achieved.	3	4	н	Plan all activities within budgetary and human resource constraints of communities, LGUs, and national government. Develop and adopt a Sustainability Strategy early in the plan implementation, which will be used to guide the design and implementation of plan activities. Ensure full implementation of the ALS Program in School-based Management during plan period, thereby preparing all administrative units in shouldering operating and maintenance costs.				

Table 11: Risk Management Plan for the ALS 2.0 ICT Strategic Plan 2022–2026									
Source of Risk	Risk Event	Ranking L C R		Ranking L C R		ng R	Risk Treatment		
Technical Risk									
Strategic Plan partners and beneficiaries are poorly targeted.	The impact and equity of plan interventions are reduced, including potential to miss intended target beneficiaries. There are unrealistic expectations of stakeholder groups.	3	4	н	Adhere strictly to formula-based criteria, if appropriate. Prioritize locations of highest need. Consider educational leaders and communities who are willing to participate.				
Educational content is not properly digitized.	Key materials may be produced but these are not translated properly into the various modalities identified in the Strategic Plan.	3	3	М	Explicitly task program personnel to find, collate, and digitize materials. Undertake negotiations with relevant stakeholders.				
Service providers (government and non-government) do not perform to expectations.	The Strategic Plan does not achieve expected outputs and benefits.	3	4	н	Select service providers based on rigorous selection criteria, including previous performance, previous client reference check/recommendation, and assessment of technical capability. Monitor contracts with service providers closely.				

Table 11: Risk Management Plan for the ALS 2.0 ICT Strategic Plan 2022–2026								
Source of Risk	Risk Event	Ranking L C R		Ranking L C R		ing R	Risk Treatment	
Political Risk								
There are peace and order problems.	There are delays in delivery of equipment, potential vandalism of any delivered equipment, or utilization of equipment in propagating anti-government ideologies.	3	3	М	Identify areas of most concern and develop an individual Security Plan around planned activities in these areas of concern. Utilize local trusted service providers and NGOs for delivering remote or community-based activities, if appropriate.			
There is lack of support for the ALS by DepEd officials and staff.	Plans and activities identified by the BAE do not get implemented because many officials misunderstand the Program and do not support it.	3	3	М	Conduct internal advocacy and training. Provide accomplishment reports and reports on collaboration with formal schools to key officials. Show Program support for DepEd-wide initiatives.			

Table 11: Risk Management Plan for the ALS 2.0 ICT Strategic Plan 2022–2026										
Source of Risk	Risk Event	R	ankii C	ng R	Risk Treatment					
Social Risk										
Inability to sustain level of commitment of community participation.	Participants withdraw from the activities. There is reduction in the implementation of plan activities.	3	3	М	Develop community plans to support the ALS. Identify and discuss levels of commitment required and, through discussion, agree on achievable activities for Program support.					
There is negative attitude of stakeholders towards key elements of the Strategic Plan.	There is unwillingness to participate in planning or implementation activities.	3	3	М	Invite local leaders to participate in cross-visits to operations in other provinces as part of the community development planning process. Forge linkages with local and respected NGOs. Explain the economic sense of the Program in simple terms.					
There is lack of gender balance in Program activities.	There is inequitable distribution of Program resources that do not address (or even compound) gender bias in the ALS Program.	2	3	М	Monitor gender participation rates and report to provincial, regional, and national levels. Renegotiate balanced gender participation with stakeholders as a fundamental element of the Program.					
Natural disasters (e.g., typhoon, flooding, pandemic) occur.	Location and timing of activities may be affected. Equipment might be damaged. Vulnerable communities may be unable or unwilling to continue with the activities.	3	4	н	Develop and implement a security and safety plan to establish protocols and procedures in case of natural disaster. Adjust activities affected by natural disasters and new pandemics.					

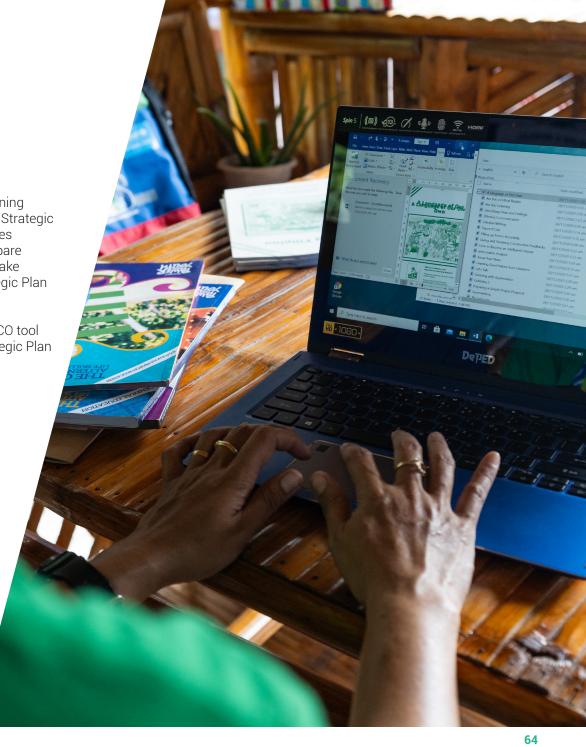
ALS – Alternative Learning System, BAE – Bureau of Alternative Education, DepEd – Department of Education, ICT – Information and Communications Technology, LGU – Local Government Unit, NGO – Nongovernment Organization.

Notes: L = Likelihood of occurrence (1=Rare; 2=Unlikely; 3=Possible; 4=Likely; 5=Almost Certain). C = Consequence of occurrence (1=Negligible; 2=Minor; 3=Moderate; 4=Major; 5=Severe). R = Risk level, which is the combination of L and C (E=Extreme; H=High; M=Medium).

The UNESCO ICT in Education Policy Planning Guide and Financial Planning Resource was used as the guide in the development of this ALS 2.0 ICT Strategic Plan. It provides a Total Cost of Ownership (TCO) tool that helps countries estimate the full cost of rolling out ICT interventions. The tool helps prepare countries for the requirements of ICT Strategic Plans and helps them make decisions on the scope and scale of these plans. The ALS 2.0 ICT Strategic Plan utilizes the tool as well.

The following key assumptions and cost benchmarks required by the TCO tool represent Program targets, existing policies, and insights from the Strategic Plan activities.

- 1. There is one CLC per barangay (total of 42,046).
- **2.** There is an average of 25 learners per CLC, regardless of program enrolled in.
- **3.** All teachers are assigned 75 learners each, spread out across the CLCs.
- **4.** Main learner devices are tablets, 10 of which shall be shared per CLC and costing P10,000 each.
- **5.** Each ALS teacher will have a laptop costing P25,000 each.
- **6.** Each CLC Administrator (School Principal) will have a laptop costing P25,000 each.
- 7 Lifespan of equipment is 5 years (no replacement during plan period).
- **8.** Rollout schedule is 25% of CLCs per year (100% by Year 4 of Strategic Plan).
- **9.** Many big-ticket items like subscription to Microsoft and Google software, DepEd Commons, and DepEd TV are not costed, as these are already available in DepEd.
- **10.** Provisions for maintenance and replacements are minimal due to short planning period.



With these in mind, **Table 12** lists the main results of the TCO tool

Table 12: Total Cost of Ownership Estimates for the ALS 2.0 ICT Strategic Plan 2022–2026												
Requirements		Running Costs										
1. Central or Common Systems	Total Costs	Year 1	Year 2	Year 3	Year 4	Year 5						
1.1 Deployment of technology platform	25,000,000	0	0	0	0	0						
1.2 Content and applications	70,000,000	0	0	0	0	0						
1.3 User training and support	17,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000						
1.4 Maintenance and technical support	8,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000						
1.5 Management, monitoring and reporting	2,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000						
Totals	122,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000						

Table 12: Total Cost of Ownership Estimates for the ALS 2.0 ICT Strategic Plan 2022-2026												
Requirements		One-time or Initial Costs										
2. Summary of all CLCs (Initial Costs) ¹		Year 1	Year 2	Year 3	Year 4	Year 5						
2.1 Deployment of technology platform		1,594,244,167	1,594,244,167	1,594,244,167	1,594,244,167	0						
2.2 Content and applications		2,500,000	2,500,000	2,500,000	2,500,000	0						
2.3 User training		182,199,333	182,199,333	182,199,333	182,199,333	0						
2.4 Maintenance and technical support		0	0	0	0	0						
Totals		1,778,943,500	1,778,943,500	1,778,943,500	1,778,943,500	0						

Table 12: Total Cost of Ownership Estimates for the ALS 2.0 ICT Strategic Plan 2022–2026												
Requirements		Running Costs										
3. Summary of all CLCs (Running Costs) ²		Year 1	Year 2	Year 3	Year 4	Year 5						
3.1 Operation of technology platform		2,186,392,000	4,372,784,000	6,559,176,000	8,745,568,000	8,745,568,000						
3.2 Content and applications		0	0	0	0	0						
3.3 User training		140,153,333	280,306,667	420,460,000	560,613,333	560,613,333						
3.4 Maintenance and technical support		0	0	0	0	0						
Totals		2,326,545,333	4,653,090,667	6,979,636,000	9,306,181,333	9,306,181,333						

Table 12: Total Cost of Ownership Estimates for the ALS 2.0 ICT Strategic Plan 2022-2026												
GRAND TOTAL	Initial Costs					7,237,774,000						
	Recurring Costs (Total All Years)				3	32,596,634,667						
	39,834,408,667											
Total Expenses per Year ²	Initial Costs		I	Running Costs								
		Year 1	Year 2	Year 3	Year 4	Year 5						
	122,000,000	4,110,488,833	6,437,034,167	8,763,579,500	11,090,124,833	9,311,181,333						

ALS – Alternative Learning System, CLC – Community Learning Center, ICT – Information and Communications Technology. Notes: 1 – according to rollout schedule. 2 – totals are cumulative as more CLCs are running the program.

O7 Financing

The total cost for the implementation of the ALS 2.0 ICT Strategic Plan is around P39.8 billion over five years. Estimates for the Central or Common Systems are the smallest among all expense categories because of the availability of some of the requirements of the Strategic Plan within DepEd. In addition, the largest expense items in this category are the development of systems and of the digital content. Initial costs for all CLCs total to around P1.8 billion per year, assuming all CLCs are reached within four years. The biggest expense item under this category is the procurement of the tablets and laptops for all CLCs. Lastly, running costs for the Strategic Plan gradually increase and max out at around P9.3 billion per year when all CLCs receive the necessary equipment and support. The biggest expense item under this category is the operating costs of electricity, internet, and other requirements.

While these figures seem daunting, analyzing these using an incremental approach will help place the estimates in proper perspective. The average initial investment per CLC is only P172,139, while the average initial investment per learner is only P6,886. In terms of maintenance costs, the average per CLC is only

P155,052, while the average per learner is only P6,202. Considering the significant gains expected from the implementation of the Strategic Plan, these amounts are very reasonable.

In addition, it is important to note that the total cost will not be shouldered by DepEd alone. The initial costs can be covered by the DepEd budget, but the running costs need not be paid solely by the Department. LGUs can share in the financing of both initial and running costs for CLCs in their jurisdictions, especially after the ALS Act has authorized the use of the Special Education Fund for the ALS as well. The average figures explained earlier are well within the capabilities of even the least resourced LGUs, especially after also considering the implications of the Supreme Court ruling on the Mandanas-Garcia petition discussed in the situational analysis. Lastly, external funding through development partners, nongovernment organizations (NGOs), and the private sector are often available, and these can help cover both initial and running costs in certain areas. The Financial Plan may also be summarized according to the major outcomes and outputs of the ALS 2.0 ICT Strategic Plan, as shown in **Table 13**.

Table 13: Financial Plan for the ALS 2.0 ICT Strategic Plan 2022–2026 Outcomes							
Outcomes	Initial Costs	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Access and Equity Expanded							37,011,464,667
Central or Common Systems	25,000,000	-	-	-	-	-	25,000,000
Initial Costs – All CLCs	-	1,594,244,167	1,594,244,167	1,594,244,167	1,594,244,167	-	6,376,976,667
Running Costs – All CLCs	-	2,186,392,000	4,372,784,000	6,559,176,000	8,745,568,000	8,745,568,000	30,609,488,000
Quality and Relevance Improved							2,792,944,000
Central or Common Systems	87,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	92,000,000
Initial Costs – All CLCs	-	184,699,333	184,699,333	184,699,333	184,699,333	-	738,797,333
Running Costs – All CLCs	-	140,153,333	280,306,667	420,460,000	560,613,333	560,613,333	1,962,146,667
Governance, Management, and Financing Modernized							30,000,000
Central or Common Systems	10,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	30,000,000
Initial Costs – All CLCs	-	-	-	-	-	_	-
Running Costs – All CLCs	-	-	-	-	-	-	-
Total	122,000,000	4,110,488,833	6,437,034,167	8,763,579,500	11,090,124,833	9,311,181,333	39,834,408,667

ALS - Alternative Learning System, CLC - Community Learning Center, ICT - Information and Communications Technology.

Bulk of the spending will go to expanding access, specifically the distribution of hardware and software to all CLCs nationwide. This will allow DepEd to effectively implement the Intermediate Outcomes and Outputs under Outcome 1. Improving quality will require around P2.8 billion, which will go largely to content development and teacher training. The economies of scale achieved by providing software and hardware to all CLCs will make achieving the Intermediate Outcomes and Outputs under Outcome 2 more efficient. Modernizing governance will have the smallest share of the budget in the Strategic Plan since as the Strategic Plan will benefit greatly from the investments DepEd has already made in ICT, and from the scale economies and thoughtful maximization of ICT solutions provided to all CLCs. A final note on the Financial Plan is that the total requirements over the plan timeline represent only around 6% of the DepEd budget in 2021. Considering that the total requirements will be spread out over five years, and that there is an expectation of an upward trend in the DepEd budget, the yearly investments for significant ICT improvements in the ALS are very reasonable.

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9.1 The Alternative Learning System Environment

International Commitments

Figure 9: United Nations Sustainable Development Goals



































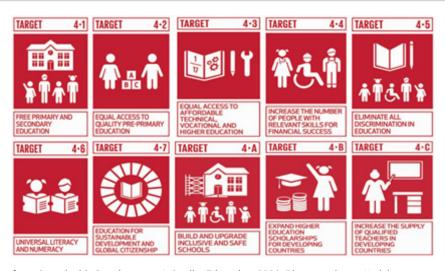




Source: Taken from United Nations Secretariat, Department of Economic and Social Affairs, Division for Inclusive Social Development. n.d. https://www.un.org/development/desa/dspd/2030agenda-sdgs.html

Sustainable Development Goal (SDG) 4: The international community has developed and committed to the SDGs for 2030. This is a list of 17 major goals for global improvement in the quality of living (**Figure 9**). The SDG 4 focuses on quality education. More specifically, the target of the goal is to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all."

Figure 10: Targets under Sustainable Development Goal 4



Source: Taken from Sustainable Development 4: Quality Education. 2020. Blog post. https://mishrapawan.wordpress.com/2020/01/30/sustainable-development-goal-4-quality-education/

Education 2030 Framework for Action: To operationalize the goals, the international education community further developed and committed to 10 targets specified in the Incheon Declaration and Framework for Action (**Figure 10**). The targets cover the whole education spectrum of early childhood to higher education. The Philippines has adopted these targets as well, and the ALS Program directly contributes to many of these.

The Global Initiative on Out-of-School Children: The Global Initiative on Out-of-School Children (OOSCI) was launched in 2010 by UNICEF and the UNESCO Institute for Statistics to help participating countries develop evidence-based strategies to reduce the number of out-of-school children and adolescents. The OOSCI looks beyond the goal of universal primary education and examines exclusion at the pre-primary, primary, and lower secondary levels of education. The Initiative works closely with national and local governments as well as civil society partners to focus on the following three core objectives.

- Develop detailed profiles of out-of-school children and children in school who are at risk of dropping out.
- Assess the underlying barriers that prevent those children from completing basic education.
- Recommend innovative policies and strategies that can bring them into school and keep them there.

Qingdao Declaration 1 and 2:8 In 2015, ministers responsible for Education, high-level government officials, representatives of civil society organizations, teachers' organizations, United Nations agencies and development partners, and members of academia and the private sector gathered to affirm the collective understanding on how to unleash the full potential of ICT for education and for achieving the SDGs. The initiative will harness the potential of ICT in supporting SDG 4 along the following areas:

- Access and Inclusion:
- Open Educational Resources and open solutions;
- Quality Learning;
- · Lifelong Learning pathways;
- Online Learning innovations;
- Quality Assurance and Recognition of Online Learning;
- Monitoring and Evaluation;
- · Accountability and Partnership; and
- International Cooperation.

Asia-Pacific Regional Strategy 2017–2022: A subset of the same international stakeholders endorsed a regional ICT strategy for Asia and the Pacific. They recognize that the transformation of learning through ICT aims to shift the culture of learning towards knowledge creation and being learner-centered by means of enhancing pedagogy and promoting active learning. They identified four priority areas for the period of the Regional Strategy:

- Secondary Education, TVET, and Higher Education;
- Quality of Teaching and Teaching Practices;
- · Inclusion and Equality; and
- Monitoring and Evaluation.

⁸ UNESCO. 2015. Qingdao Declaration: International Conference on ICT and Post-2015 Education. https://bangkok.unesco.org/sites/default/files/assets/article/ICT%20in%20Education/AMFIE2017/Qingdao%20Declaration.pdf

National Context - Political

Increased focus on the basic education system due to low performance in international assessments: The years 2019 and 2020 saw the Philippines perform poorly in three major international assessments: the Programme for International Student Assessment 2018, Trends in International Mathematics and Science Study 2019, and the Southeast Asia Primary Learning Metrics 2019. As is the case with countries that perform poorly in these international comparisons, the country is in shock and is looking for ways to significantly improve learning for the next rounds of international assessments. This has prompted all education stakeholders to examine DepEd very closely, and considerable changes are expected over the next few years.

Persistent issues with access and retention of students: While there is increasing access in basic education, there are also alarming dropout rates and low completion rates especially for Grades 10 and 12. The low passing rate in A&E tests represents wasted time invested by A&E completers as they do not receive the equivalent certification to improve their qualifications.

Competition for resources with other priorities: The COVID-19 pandemic has shut down the economies of almost all countries worldwide. Governments are simultaneously trying to provide social safety nets to their citizens while infusing the health care system with all the support it needs. Education has taken a back seat to the economy and health, and the longer it takes to control the spread of the virus, the more challenging it is to return to pre-pandemic levels of education spending, which was already insufficient to fund the SDG 4 targets to begin with. Also, the national elections in 2022 might bring about changes in the budget priorities.

Possible decentralization of more education mandates: Philippine Supreme Court Ruling No. 199802, more popularly known as the Mandanas ruling, is expected to bring more funds to LGUs, which in turn, are subject to the varying priorities of local chief executives. While education has always been one of the priorities of LGUs, it is still unclear how this potential windfall will be managed by local leaders. What is clear, however, is that the President has issued an Executive Order regarding the full devolution of certain functions of the Executive branch of government to LGUs, and this identifies basic services and facilities as the main area affected.¹⁰

⁹UNESCO. 2020. *Act Now: Reduce the Impact of COVID-19 on the Cost of Achieving SDG 4.* https://gemreportunesco.wpcomstaging.com/2020/09/04/act-now-to-reduce-the-impact-of-covid-19-on-the-cost-of-achieving-sdg4/

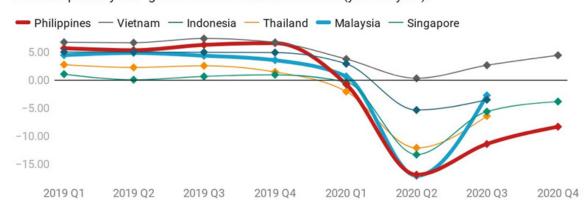
¹⁰ Government of the Philippines. 2021. Executive Order No. 138. Manila. https://www.officialgazette.gov.ph/downloads/2021/06jun/20210601-EO-138-RRD.pdf

National Context - Economic

Figure 11: Comparison of Quarterly GDP Growth Rates in ASEAN Countries, 2019–2020 (%)

PH economy now ASEAN's worst performer

Percent quarterly GDP growth rates of ASEAN countries (year-on-year).



ASEAN – Association of Southeast Asian Nations, GDP – Gross Domestic Product, PH – Philippine, Q – Quarter. Source: Taken from Punongbayan, JC. 2020, November 18. [ANALYSIS] Under Duterte's Watch, PH Economy Crashes the Most in ASEAN. Rappler. https://www.rappler.com/voices/thought-leaders/analysis-under-duterte-ph-economy-crashes-most-asean/

Economic growth: The country experienced the worst recession in the ASEAN region at the height of the pandemic (**Figure 11**). This has been attributed to strict lockdowns that hindered even modest economic activity. By March 2021, COVID-19 cases were rising at rates faster than before and the mobility restrictions were brought back to control the transmission of the virus. This signals a longer road to economic recovery, thus a longer amount of time needed to get back to pre-pandemic economic activity, which will in turn significantly affect participation and investment in education.

Employment situation: At the individual level, the ability to maintain a job and provide for the family affects the ability to send children to school and, in some cases when the workers themselves have not finished schooling, affects the interest to attend adult education programs. As the economy slowly recovers, more jobs are becoming available, and unemployment is gradually decreasing. However, current labor statistics have not yet returned to pre-pandemic levels, and this will pose a continued challenge to education participation (Table 14).

Table 14: Key Philippine Labor Statistics, October 2020							
Philippines	October 2020 ^P	July 2020 [₽]	April 2020 ^F	October 2019 ^r			
Population 15 years old and over (in 000)	74,307	74,061	73,722	72,603			
Labor Force Participation Rate (%)	58.7	61.9	55.7	61.4			
Employment Rate (%)	91.3	90.0	82.4	95.4			
Underemployment Rate (%)	14.4	17.3	18.9	12.8			
Unemployment Rate (%)	8.7	10.0	17.6	4.6			

Note: P — Estimates are preliminary and may change; R — Revised estimates based on 2015 Population Census-based projection; F — Final. Source: Government of the Philippines, Department of Labor and Employment. 2020. October 2020 Labor Force Survey.

Gap in science and technology workers: There is now an oversupply of workers in the computing/information technology sector. However, a large demand for scientists, mathematicians, and engineers is expected by year 2025 (see Table 15). These skills help drive high-value sectors of the economy, but also require high levels of intelligence and skill from its practitioners. With the current performance in international large-scale assessments, the number and quality of the outputs of the education system may not be enough to fill this gap.

Table 15: Projected Supply, Demand, and Gap of S&T Workers in the Philippines, 2020 and 2025

	Based on Average		Based 0	on PDP
	Historical Growth of GVA		2017-2020 G	rowth Targets
	2020	2020 2025		2025
Supply Life Sciences Physical Sciences Math and Statistics Computing /IT Engineering	41,089	48,932	41,089	48,932
	18,820	21,323	18,820	21,323
	24,530	27,445	24,530	27,445
	1,156,545	1,586,827	1,153,545	1,586,827
	1,287,053	1,485,586	1,287,053	1,485,586
Demand Life Sciences Physical Sciences Math and Statistics Computing /IT Engineering	44,615	57,902	45,799	62,896
	21,725	28,179	22,394	31,012
	28,888	37,674	29,615	40,730
	1,000,323	1,303,877	1,026,696	1,414,868
	1,448,009	1,874,553	1,490,765	2,055,489
Gap (Demand - Supply) Life Sciences Physical Sciences Math and Statistics Computing /IT Engineering	3,526	8,970	4,710	13,964
	2,905	6,855	3,575	9,689
	4,357	10,229	5,085	13,285
	-153,223	-282,950	-126,850	-171,960
	160,956	388,967	203,713	569,903

GVA — Gross Value-Added, IT — Information and Technology, PDP — Philippine Development Plan, S&T — Science and Technology. Source: Philippine Institute for Development Studies. 2020. Future S&T Human Resource Requirements in the Philippines: A Labor Market Analysis. Manila. https://pidswebs.pids.gov.ph/CDN/PUBLICATIONS/pidsdps2032.pdf

Table 16: Projected Spending in Education and Basic Education (% of GDP and Total Government Spending)									
	SY 2022- 2023	SY 2023-2024	SY 2024-2025	SY 2025-2026	SY 2026-2027	SY 2027-2028	SY 2028-2029	SY 2029-2030	SY 2030-2031
GDP (in billion pesos)	18,635	19,846	21,136	22,510	23,973	25,531	27,191	28,958	30,840
Education as % of GDP	4.1%	3.9%	3.8%	3.6%	3.5%	3.2%	3.0%	2.9%	2.8%
Basic Education as % of GDP	3.2%	3.0%	2.8%	2.7%	2.5%	2.3%	2.1%	2.0%	1.9%
Government Budget (in billion pesos)	4,506	4,506	4,594	4,893	5,211	5,550	5,910	6,294	6,704
Government Budget as % of GDP	24.2%	22.7%	21.7%	21.7%	21.7%	21.7%	21.7%	21.7%	21.7%
Education as % of Total Government Budget	17.1%	17.3%	17.3%	16.6%	15.9%	14.7%	14.0%	13.4%	12.8%
Basic Education as % of Total Government Budget	13.3%	13.3%	13.0%	12.3%	11.7%	10.5%	9.8%	9.1%	8.6%

GDP – Gross Domestic Product, SY – School Year. Source: Government of the Philippines, Department of Education. Forthcoming. *Basic Education Development Plan 2030* (draft). Manila.

Education investments: At the time of writing, DepEd is finalizing its Basic Education Development Plan 2030, which outlines its priorities for the decade up to year 2030. While the Department is proposing significant increases in education budgets, it is also anticipating that the global macroeconomic situation will have a significant effect on government budgets as a whole (see **Table 16**). This has implications on meeting SDG 4 financing and targets, in relation with international findings that governments in richer countries tend to devote a greater share of national income to education than low-income countries.¹¹ In fact, two-thirds of low- and lower-middle-income countries have cut their education budgets since the onset of COVID-19.¹²

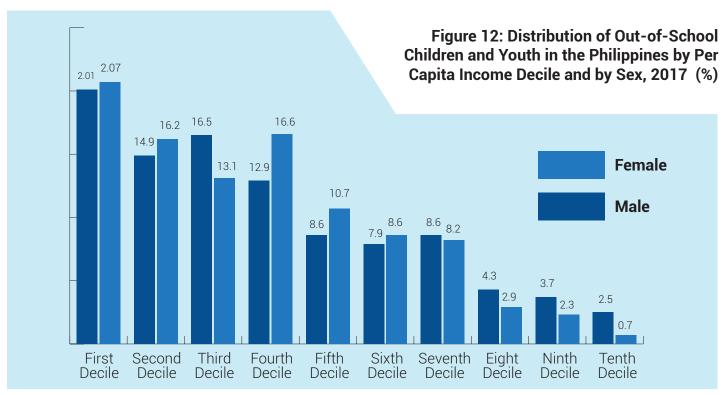
[&]quot;UNESCO and the World Bank. 2021. Education Finance Watch 2021. https://en.unesco.org/gem-report/education-finance-watch-2021

¹² UNESCO and the World Bank. 2021. Education Finance Watch 2021. https://en.unesco.org/gem-report/education-finance-watch-2021

Table 17: Proportion of Philippine Population (Aged 3–30) Currently Attending School by Age Group and by Education Level, 2019 (%)							
Level Currently Attending and Region	Population (3 to 30	Age Group					
Level Currently Attending and Region	Years Old)	3-4	5	6-11	12-15	16-17	18-30
Philippines ('000)	57,681	5,007	2,049	13,287	8,708	4,244	24,388
Not currently attending	43.0	77.6	17.2	2.1	4.9	11.8	79.4
Attending	57.0	22.4	82.8	97.9	95.1	88.2	20.6
No grade completed/Early childhood education	10.6	100.0	95.8	5.6	-	-	-
Elementary level	40.8	-	4.2	93.7	13.0	0.8	0.5
Elementary graduate	*	-	-	0.1	0.1	*	-
Junior high school level	28.3	-	-	0.6	85.8	42.6	10.3
Junior high school graduate	0.1	-	-	-	0.2	0.3	0.1
Senior high level	10.7	-	-	*	0.9	54.8	27.8
Senior high graduate	0.1	-	-	-	*	0.3	0.2
Post-secondary non-tertiary level	0.2	-	-	-	-	*	1.0
Post-secondary non-tertiary graduate	-	-	-	-	-	-	-
Short-cycle-tertiary level	0.1	-	-	-	-	0.01	0.4
Short-cycle-tertiary graduate	-	-	-	-	-	-	-
College level	9.1	-	-	-	-	1.14	58.9
College graduate or higher	0.1	-	-	-	-	-	0.7

Note: An asterisk (*) denotes a figure less than 0.1%; a hyphen (-) means data is not available. Source: Government of the Philippines, Philippine Statistics Authority. 2019. Functional Literacy, Education and Mass Media Survey. Manila. https://psa.gov.ph/content/functional-literacy-education-and-mass-media-survey-flemms

Accumulation of individuals who did not graduate high school: Despite significant progress in participation in formal school, there are still considerable numbers of individuals aged 12 to 15 and 16 to 17 who do not or cannot attend school (**Table 17**). These statistics increase as the age group gets older. Over time, these individuals have less and less probability of going back to school, and they accumulate in the general population. Many of them lead lives that do not maximize their potential simply because they have no high school diploma to present to potential employers or investors.



Note: Deciles arranged from lowest (first decile) to highest (tenth decile) per capita income. Source: Government of the Philippines, Philippine Statistics Authority. 2019 Annual Poverty Indicators Survey. Manila. https://psa.gov.ph/sites/default/files/2019%20APIS_signed.pdf

Poverty and school participation: Data shows that poverty is indeed one of the major reasons for not attending school. A full two-thirds of out-of-school youth come from the poorest 40% of the population (**Figure 12**). What is also alarming is that even those that might be considered as middle class also have a significant representation in OSYAs. This reflects the degree of income inequality in the country and the need to provide more comprehensive support to the poorer segments of society.

This finding is echoed by a UNICEF study on barriers in accessing even the ALS.¹³ The top two reasons for not completing the ALS Program are lack of financial support and the need to work. This shows how much of a burden the opportunity costs of continuing education are

Internal migration: Over the past two decades, there has been an increase in migration from rural areas to urban locations. Families choose to live in smaller spaces in the city just to be near relatively better sources of income. Other families leave their children in the provinces while one or both parents look for work in urban or industrial areas. However, the pandemic has reversed this trend somewhat temporarily, as employment was scarce in the cities, and workers opted to go back to their provinces to ride out the pandemic. Abrupt migration patterns like these put pressure on the education system in two ways: the receiving end experiences pressure to accommodate the newcomers, while the sending end needs to locate new learners but at the same time consider the possibility that those who left might come back at some point in the future.

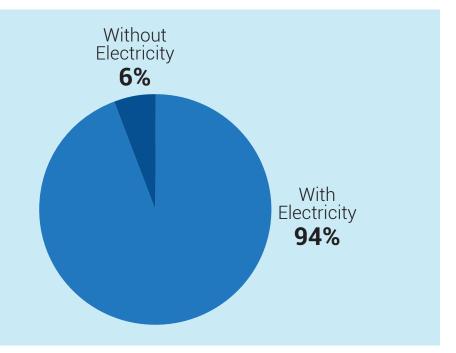
Early pregnancy: During the lockdowns, some concern has been raised by the government regarding some distinct cases of teenage pregnancy. More than the possible effect this might have on population growth, the concern lies in the fact that teenage moms often leave school and do not come back, and if they do not receive financial and family support, they go on to lead some of the poorest families in the country.

¹³ UNICEF. 2021. Overcoming Barriers to Access and Complete the Alternative Learning System among Adolescents. ALS Policy Brief. Manila. https://www.unicef.org/philippines/media/2576/file/Policy%20brief.pdf

Figure 13: Distribution of Philippine Households With or Without Electricity, 2019 (%)

94% of interviewed households are with electricity.

- Proportion of households without electricity are higher in rural areas than in urban areas.
- Top three regions with the highest percentage of households without electricity:
 - 1. BARMM: 15.7%
 - 2. Region XII: 11.2%
 - 3. Region V: 11.0%



BARMM – Bangsamoro Autonomous Region in Muslim Mindanao. Source: Taken from Government of the Philippines, Department of Information and Communications Technology. 2020. National Information and Communications Technology Household Survey (NICTHS): Presentation of Results. Presentation.

Availability of electricity: Before the pandemic, a national survey conducted by the government revealed that there are still 6% of households that do not have access to reliable electricity (**Figure 13**). In BARMM, this figure rises to almost 16%. This has significant implications on education, especially if students are expected to study at night or are expected to supplement learning through technology. On a wider scale, access to electricity is particularly important to overall quality of life, and the lack of it in a substantial part of the population shows that much still needs to be done in terms of equity in the country. For context, expenditures for utilities like electricity take up around 8% to 10% of the household budget.

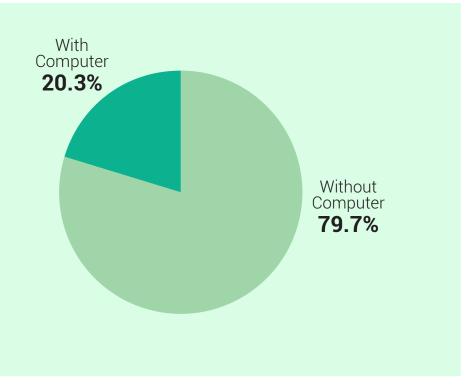
Figure 14: Distribution of Philippine Households With or Without Computer, 2019 (%)

Majority (79.7%) of interviewed households do not own a computer.

- Percentage of households without a computer is high across all regions.
- Ownership of computers is higher in urban areas than in rural communities.

Top three regions with the highest percentage of households without computer:

- 1. BARMM: 91.0%
- 2. Region IX: 88.5%
- 3. Region V: 86.2%



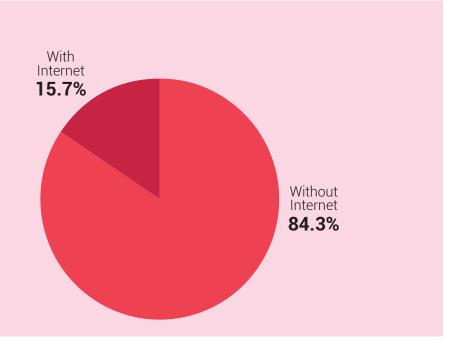
BARMM – Bangsamoro Autonomous Region in Muslim Mindanao. Source: Taken from Government of the Philippines, Department of Information and Communications Technology. 2020. National Information and Communications Technology Household Survey (NICTHS): Presentation of Results. Presentation.

Availability of computers: Unfortunately, the same survey showed that only 20% of households nationwide owned a computer (**Figure 14**). While statistics for mobile devices are higher, the best way to participate in some form of blended learning is through laptops or personal computers since these are generally more user-friendly and have more functionalities. Due to the decision of schools to conduct classes on a distance education mode, this figure is expected to have increased during the pandemic, but it still represents a major challenge in implementing ICT-enhanced learning modalities. For context, a laptop computer on the lower end of the spectrum cost around P20,000 in 2021, almost twice the monthly minimum wage in the National Capital Region (NCR).

Figure 15: Distribution of Philippine Households With or Without Internet Access, 2019 (%)

Majority of households do not have access to the internet (84.3%).

- BARMM (94.9%) and Region V (94.3%) have the highest percentage of households without internet access.
- Incidence of households without internet access is higher in rural areas than in urban communities
- NCR has the highest percentage of households with internet access at 32.3%



BARMM – Bangsamoro Autonomous Region in Muslim Mindanao. Source: Taken from Government of the Philippines, Department of Information and Communications Technology. 2020. National Information and Communications Technology Household Survey (NICTHS): Presentation of Results. Presentation.

Internet coverage and subscription: As expected, the number of households that have access to the internet is even lower than those who own computers (**Figure 15**). This makes online learning even more challenging, especially during periods when face-to-face classes are not possible or not recommended by authorities. The functionalities of computers and other gadgets are not maximized if not used online, and the teachers need to be more creative in the teaching strategies if the internet is not accessible to all learners. For context, expenditures for communications like internet take up around 0% to 3% of the household budget. A reliable internet connection in the NCR will cost around P1,500 monthly, equivalent to about three days' minimum wages.

National Context - Environmental

Health emergencies: The most pressing global issue as this Strategic Plan was being written was the continued impact of the COVID-19 pandemic. For the ALS, the impact was incredibly significant: enrollment for School Year 2020–2021 was only half of that of the previous year. The country opted for complete school closures, and this included CLCs. As vaccines against the virus become increasingly available, people are not expecting another pandemic any time soon. However, the possibility of localized outbreaks of some other disease is significant, and the lessons from the pandemic should inform future responses to disruptions in education services. However, even if current vaccines are starting to be recommended for individuals below 18 years old, global supply is still low thus leading some to speculate that the return to physical classes might take longer than expected.

Natural disasters: Aside from the pandemic, the country has recently experienced weather disturbances that are deemed stronger than usual, a major volcanic eruption, and regular occurrences of earthquakes. All these have implications on education service delivery and raise the need for alternative modalities of reaching learners, regardless of how long they shall be displaced from their usual residence.

Human-induced disasters: Something that may also be a political concern is the existence of armed groups in some areas of the country, leading to clashes with government forces. These incidents create disruptions in educational services, as populations usually need to evacuate to avoid being caught in the crossfire. Aside from these, tribal or clan wars also happen in certain locations, which have the same effect of class disruptions.

National Context - Legal

National ICT policies: The country has developed various ICT-related plans and policies that map out improvements in different areas over the next few years. These provide a backdrop for all education improvements related to ICT as these define the status of both demand- and supply-side technologies critical in the design of education plans and programs. Some of these plans are:

- National Broadband Plan 2017:
- National Cyber Security Plan 2022;
- Digital Terrestrial Television Broadcasting Migration Plan 2017; and
- Executive Order No. 127, s. 2021, or Expanding the Provision of Internet Services through Inclusive Access to Satellite Services, Amending Executive Order No. 467 (s. 1998) for the Purpose.

ALS Act: RA 11510, called the Alternative Learning System Act, institutionalized the Program and provided the impetus for this Strategic Plan. It is the culmination of the decades-long advocacy to invest in the Program, but it is also the beginning of a new chapter in the Program's implementation. The main provisions of the law are:

- setting up CLCs in all municipalities and cities;
- creation of the BAE;
- improvement of the ALS teacher development program;
- hiring more ALS teachers;
- making the A&E Test more frequent and accessible;
- providing transportation and teaching aid allowances for the ALS teachers; and
- strengthening partnerships with external ALS implementers.

Figure 16 provides an illustration of the law's important provisions.



A&E – Accreditation and Equivalency, ALS – Alternative Education System,

CLC - Community Learning Centers, IPEd - Indigenous Peoples Education.

Tab	le 18: Summary of Othe	er Relevant Philippine Laws that have Implications on the ALS and the ALS 2.0 ICT Strategic Plan
Republic Act (RA)/ Date of Passage	Short Title	Description
RA 10173 August 15, 2012	Data Privacy Act of 2012	Provides for the protection of individuals from unauthorized processing of personal information, "the fundamental human right of privacy, of communication, while ensuring free flow of information to promote innovation and growth" (supported by Executive Order 2, s. 2016, on Freedom of Information).
RA 10647 November 21, 2014	Ladderized Education Act	Institutionalizes the ladderized interface between TVET and higher education to open the pathways of opportunities for career and educational progression of students and workers, creates a seamless and borderless system of education, empowers students and workers to exercise options or to choose when to enter and exit in the educational ladder, and provides job platforms at every exit as well as the opportunity to earn income.
RA 10665 July 9, 2015	Open High School System Act	Broadens access to relevant quality education through the employment of an alternative secondary education program that will enable the youth to overcome personal, geographical, socioeconomic, and physical constraints, to encourage them to complete secondary education.
RA 10679 August 27, 2015	Youth Entrepreneurship Act	Establishes, maintains, and supports a complete, adequate, and integrated system of education and training to encourage the entrepreneurial spirit among our youth as well as support and promote the growth of young entrepreneurs nationwide.
RA 10931 August 3, 2017	Universal Access to Quality Tertiary Education Act	Institutionalizes free tuition and exemption from other fees in state universities and colleges, local universities, and colleges in the Philippines.
RA 10968 January 16, 2018	Philippine Qualifications Framework Act	Institutionalizes the Philippine Qualifications Framework to encourage lifelong learning of individuals, provide employees specific training standards, ensure that training and education institutions comply with specific standards and are held accountable for achieving corresponding learning outcomes, and provide government with a common taxonomy and qualifications typology as bases for recognizing education and training programs as well as the qualifications formally awarded and their equivalents.
RA 11206 February 14, 2019	Secondary School Career Guidance and Counseling Act	Institutionalizes a career guidance and counseling program; Equips secondary education students with the capability to make educated career decisions and expose them to relevant labor markets; Ensures graduates of tertiary education meet the requirements of the government, industry, and the economy.
RA 11230 February 22, 2019	Tulong Trabaho Act	Provides for more innovative approaches to TVET linked to the requirement of industry to primarily address unemployment and job-skills mismatch.

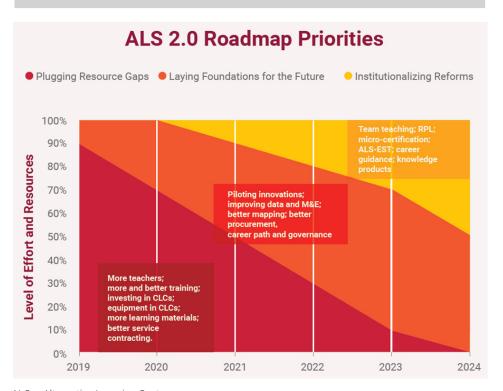
ALS – Alternative Education System, ICT – Information and Communications Technology, RA – Republic Act. Source: Government of the Philippines, Department of Education. Forthcoming. *Basic Education Development Plan 2030* (draft). Manila.

Other relevant laws: Table 18 summarizes other laws that have implications on the demand and supply of the ALS and the need to improve it through ICT. There are many options for the ALS learners during and after they complete the Program. These include financial assistance, guidance programs and opportunities for training and entrepreneurship. These opportunities can benefit from the improved utilization of ICT in the ALS as well.

ALS Version 2.0 Strategic Roadmap: The basis for the ALS Act is the ALS Version 2.0 Strategic Roadmap. The law strengthened the components of the Roadmap and added a few provisions that could not be addressed by existing policies. The Roadmap covers the main DepEd strategic goals of Access, Quality, and Governance; Figure 17 shows the priorities per year of the Roadmap when it was approved before the pandemic. The Roadmap recognizes the need to plug resource gaps before embarking on big-ticket innovations in the Program. By the middle of the Roadmap period, new interventions should have been piloted to determine proof of concept and to prepare for eventual institutionalization. By the end of the Roadmap period, new elements in the ALS Program will have taken root and should be implemented uniformly nationwide. This timeline and level of investment has definitely changed due to the pandemic, but the intentions to pursue the priorities remain.

As shown in **Figure 18**, the programs, projects, and activities (PPAs) under Strategic Goal 1 of the Roadmap consider the position of the ALS Program in relation to its stakeholders, which are owners (DepEd management), employees (the ALS implementers), suppliers (NGOs and other partners), and customers (learners). Ensuring the attainment of Strategic Goal 1 requires that management become more supportive of the Program; mobile teachers be more efficient; external partners become more cooperative; and learners become more open to alternative education opportunities.

Figure 17: ALS Version 2.0 Strategic Roadmap Priorities



ALS - Alternative Learning System,

ALS-EST – Alternative Learning System – Education and Skills Training, CLC – Community Learning Center, M&E – Monitoring and Evaluation.

Source: Taken from Government of the Philippines, Department of Education. 2020. Alternative Learning System Version 2.0 Strategic Roadmap. Manila.

https://www.deped.gov.ph/wp-content/uploads/2020/07/02142020_als_roadmap_maroon.pdf

Figure 18: Goals, Objectives, and Programs, Projects, and Activities of the ALS Version 2.0 Strategic Roadmap



ALS – Alternative Learning System, CLC – Community Learning Center, ICT – Information and Communications Technology, LRMDS – Learning Resources Management and Development System.

Source: Taken from Government of the Philippines, Department of Education. 2020. Alternative Learning System Version 2.0 Strategic Roadmap. Manila. https://www.deped.gov.ph/wp-content/uploads/2020/07/02142020_als_roadmap_maroon.pdf

The PPAs under Strategic Goal 2 also consider the position of the ALS Program in relation to its stakeholders. Ensuring attainment of Strategic Goal 2 requires that management provide more resources to the Program; mobile teachers embrace new teaching strategies; and learners be more diligent in their studies.

The PPAs under Strategic Goal 3 also consider the position of the ALS Program in relation to its stakeholders. Ensuring the attainment of Strategic Goal 3 requires that management become more open to shared governance and more supportive of the ALS teachers; mobile teachers embrace new technologies and systems to improve Program implementation; and the BAE be more introspective and adopt a culture of continuous improvement.

By the end of the Roadmap period, it is envisioned that the ALS 2.0 would have evolved into a program that properly complements K to 12 education in formal schools in the Philippines. Among other characteristics, ALS 2.0 should be:

- 1. Able to properly recognize prior learning and provide genuine modular courses leading to micro-level certifications that are useful for the labor market;
- 2. Of an optimal size and offering high-quality academic education to individuals facing difficulty in completing basic education;
- 3. Providing skills and livelihood training through partnerships with local industries and experts;
- 4. A fair career path that allows professional growth for its teachers within the context of Department-wide human resource development;
- 5. A program respected within DepEd and provided with adequate resources and support to be able to meet its targets properly.

The ALS 2.0 is redefining a program that has been misunderstood for the last two decades. It recognizes its shortcomings and reinvents its strengths. The ALS 2.0 is a complementary program under K to 12 but it can also provide innovations that improve access to quality education nationwide.

Of all factors discussed in this subsection, DepEd should be concerned about poverty. It is a phenomenon that the Department has no control over but affects its performance significantly since it makes focusing on education more challenging. Aside from creating more difficult challenges in learning, poverty also creates more OSYAs.

9.2 Good (and Worst) ICT in Education Practices

The concept of educational technologies has been around for as long as there has been education. In a sense, it has run parallel to the various industrial revolutions experienced by humankind over centuries. There are therefore countless literature and experience on this topic. This subsection will explain some of the more prominent and more recent ones.

	Table 19: Summary of EdTech Interventions in Developing Countries by Thematic Area						
	Access to Technology	Technology-enabled Behavioral Interventions	Improvements to Instruction	Self-led Learning			
Intended Policy Targets	Low penetration of technologies able to host educational features, low familiarity with digital skills.	Informational barriers, behavioral inconsistencies, lack of accountability, alignment of incentives.	Gaps in teacher knowledge, difficulties to recruit teachers in remote areas, scalability of student and teacher training programs.	Reinforcement of material and practice problems, addressing student-specific gaps in skills, adjusting the pace and level of instruction.			
Effectiveness	Very low for academic learning, medium for increases in familiarity with digital tools.	Low-to-medium-sized effects in learning.	Consistently medium to large effects in learning.	Among the software evaluated, consistently medium to large effects in learning.			
Cost- effectiveness	Extremely low. Poor effectiveness coupled with high marginal costs. As a result, expensive to scale.	Very high, particularly due to the very low marginal costs of most interventions. Very high potential for scalability.	High, as fixed costs of product development tend to be higher than marginal costs.	High, as interventions are often implemented in community- or school-level computer labs so the same hardware/software can reach many students.			
Best Uses	Increase familiarity with technology, or as a platform to implement other types of EdTech interventions.	Improve enforcement of policies, provide information at scale.	Deliver high-quality education to areas where this is a serious constraint.	Complement classroom instruction, reinforce lessons, fill in content gaps.			
Potential Pitfalls and Challenges	Leakage and misuse of equipment, crowding out of time better spent in other educational activities.	Interventions require particular deep contextual knowledge about behaviors that can be shaped through relatively lowtouch interventions.	A sudden change in technology that does not directly address a pressing problem may hinder instruction and lead to negative effects in learning.	Software needs to be developed for more contexts, languages and subjects. Reliance on self-guidance may benefit high achievers more, increasing withinclass inequality.			
Examples of Interventions	One-laptop-per-child (OLPC) (Barrera- Osorio and Linden, 2009; Cristia et al. 2017), provision of handheld devices (Habyarimana and Sabarwal, 2018; Mensch and Haberland, 2018).	Keeping parents up to date on student performance and attendance via SMS (Berlinski et al., 2016). Monitoring teacher attendance through camera linked to pay incentives (Gaduh et al., 2020).	Broadcasting of live instruction remotely (Johnston and Ksoll, 2017). Pre-recorded video and audio lessons to supplement classroom instruction (Beg et al., 2019; Naslund-Hadley et al., 2014).	Software (typically self-adaptive) to practice language and math skills (Muralidharan et al., 2019; Linden, 2008; Carrillo et al.; 2011; Araya et al., 2019) Online classes (Chong et al., 2020).			

EdTech – Educational Technology, SMS – Short Messaging Service.
Source: Rodriguez-Segura, Daniel. 2020. Educational Technology in Developing Countries: A Systematic Review. School of Education and Human Development, University of Virginia. https://www.curry.virginia.edu/sites/default/files/uploads/epw/72_Edtech_in_Developing_Countries.pdf

Table 19 summarizes a systematic review of educational technology in developing countries. It found that EdTech interventions centered around self-led learning and improvements to instruction are the most effective forms of EdTech at raising learning outcomes. Similarly, technology-enabled behavioral interventions are less promising for generating large effects but highly cost-effective given their typically low marginal costs. While expanding access to technology alone is not sufficient to improve learning, it is a necessary first step for other types of interventions. More broadly, the overall success of interventions rests on the thoughtful customization of the EdTech solution to the policy constraints at hand. Finally, EdTech interventions across all thematic areas can and should act as complements by leveraging their respective comparative advantages to address deficiencies within educational systems in developing countries.

The World Bank maintains a popular blog on EdTech,¹⁴ and one entry outlines the worst practices in ICT use in education (see **Table 20**). It is important to state that DepEd is cognizant of these detrimental practices and consciously avoided these in the development of this Strategic Plan.

The next subsection lists selected good practices and their key characteristics within the past decade. It is important to note that while some technologies have been around for a long time, the COVID-19 pandemic has forced many countries and education ministries to mature quickly in terms of design and implementation. The result is a more modern utilization of technologies, be they old or cutting edge.

Table 20: Worst Practices in ICT Use in Education

- 1. Dump hardware in schools, hope for magic to happen.
- 2. Design for OECD learning environments, implement elsewhere.
- 3. Think about educational content only after you have rolled out your hardware.
- 4. Assume you can just import content from somewhere else.
- 5. Don't monitor, don't evaluate.
- 6. Make a big bet on an unproven technology.
- 7. Don't think about (or acknowledge) total cost of ownership / operation issues or calculations.
- 8. Assume away equity issues.
- 9. Don't train your teachers (nor your school principals, for that matter).

ICT – Information and Communications Technology, OECD – Organisation for Economic Cooperation and Development Source: World Bank. 2010. Worst Practice in ICT Use in Education. World Bank Blogs. https://blogs.worldbank.org/edutech/worst-practice

¹⁴ World Bank. n.d. *EduTech*. World Bank Blogs. https://blogs.worldbank.org/edutech

Global Good Practices

The same World Bank EdTech blog also has an entry on the principles or approaches to consider when planning to introduce ICTs into remote, low-income educational environments (**Table 21**). While not all of these will be applicable in all locations in the Philippines, DepEd has taken note of these to increase the probability of success of this Strategic Plan.

Table 21: Principles to Consider When Introducing ICTs into Remote, Low-Income Educational Environments

- 1. The best technology is the one you already have, know how to use, and can afford.
- 2. Start down and out, and then move up and in.
- 3. Teachers have a key role to play, and should be supported with technology in carrying out their role.
- 4. It's the content, not the container.
- 5. If you are pointed in the wrong direction, technology may help you get there more quickly.
- 6. Anticipate, and mitigate, Matthew Effects.
- 7. To succeed in doing something difficult, you may first need to fail (and learn from this failure).
- 8. Put sustainability first.
- 9. We know a lot about worst practices we should make sure we don't repeat them.

ICT – Information and Communications Technology.
Note: The third principle has been rephrased.
Source: World Bank. 2013. 10 Principles to Consider When Introducing ICTs into Remote, Low-Income Educational Environments. World Bank Blogs.
https://blogs.worldbank.org/edutech/10-principles-consider-when-introducing-icts-remote-low-income-educational-environments

The following are selected examples of good practices in various countries; their descriptions can be found in the relevant footnotes. In general, there are some solutions that are more appropriate in certain contexts, rather than universal solutions that can address complex situations. Some of these are already being used in the Philippines, while some are more popular in other regions of the world. These provide a wealth of experience from which the Strategic Plan can pick up on.

- 1. Radio: Interactive Radio Instruction in many countries. 15
- 2. TV: Telesecundaria / Television Educativa in Mexico. 16
- 3. Internet-based:17
 - a. Content and repositories Khan Academy;
 - b. National learning platforms Korea Educational Broadcasting System;
 - c. Assessment Tangerine Central;
 - d. File Manager Evernote;
 - e. Learning Management Systems Moodle;
 - f. Training We Love Reading; and
 - g. Video conference systems Google Hangouts.
- 4. Mobile phones: Ubongo. 18

National Good Practices

At the country level, it is difficult to select good practices that can provide significant net benefits because of the trial-and-error nature of ICT in Education implementation. However, there are major initiatives that have proven to be useful before and even more so during the pandemic. This implies that while there remains to be challenges in the implementation of the following programs, these have the potential to be significant interventions in the near future.

1. Radio: The Radio-Based Instruction (RBI) Program is an alternative learning delivery mode using radio broadcast to deliver the ALS programs. As a form of distance learning, it is able to expand access to education by bringing it to where the learners are. It aims to provide learning opportunities to listeners and enable them to acquire equivalency in basic education through the broadcast of lessons. ¹⁹ This is sometimes aided by loudspeakers to provide nearby households access to the radio-based programs.

¹⁵ World Bank. 2020. *Remote Learning Response to COVID-19 Knowledge Pack*. Presentation. Public Documents Search. https://pubdocs.worldbank.org/en/925611587160522864/KnoweldgePack-COVID19-RemoteLearning-LowResource-EdTech.pdf

¹⁶ World Bank. 2020. *Rapid Response Guidance Note: Educational Television and COVID-19* (English). Washington, D.C. http://documents.worldbank.org/curated/en/659411587145759242/Rapid-Response-Guidance-Note-Educational-Television-and-COVID-19

¹⁷World Bank. 2020. Remote Learning, Distance Education and Online Learning During the COVID19 Pandemic: A Resource List by the World Bank's EdTech Team. https://documents1.worldbank.org/curated/en/964121585254860581/pdf/Remote-Learning-Distance-Education-and-Online-Learning-During-the-COVID19-Pandemic-A-Resource-List-by-the-World-Banks-Edtech-Team.pdf

¹⁸ UNESCO. 2020. Distance Learning Solutions. https://en.unesco.org/covid19/educationresponse/solutions

¹⁹ Government of the Philippines, Department of Education. n.d. ALS Programs. https://www.deped.gov.ph/k-to-12/inclusive-education/als-programs/

- 2. TV: DepEd launched the DepEd TV channel to make education more accessible to students at a time when schools were closed, and blended learning was the main modality of education during the COVID-19 pandemic. DepEd tapped various government and private sector partners to build a network of content development and broadcast solutions. The scheduling also allows the widest access to the programs, even if households have multiple enrolled children and just one TV set.
- 3. Internet-based: DepEd Commons is the DepEd version of Open Educational Resources. It is a platform that contains various references and materials for teachers and students. This made supplementary materials accessible online from a trusted source, while ensuring that using the platform will not incur charges to mobile internet subscriptions because the site is zero-rated.

4. Special mentions:

a. eSkwela: The eSkwela Project was a flagship project of the then Commission on ICT with the DepEd Bureau of Alternative Learning System (BALS), now defunct, that provided ICT-enhanced educational opportunities for the country's OSYAs. Funded initially by the Asia-Pacific Economic Cooperation (APEC) Education Foundation, its expansion was funded by the e-Government Fund of the Philippine government, with counterpart contributions from local partners like LGUs, church groups, NGOs, and foundations.

Under this project, community-based e-learning centers (or eSkwela Centers) were set up across the country that enabled ICT-supported alternative education programs. With the use of relevant interactive e-learning materials, blended and collaborative modes of instruction, and performance-based assessment in a problem- or project-based learning environment, it aimed to bridge the widening digital divide and social chasms between those who are formally educated and those who are not. With over 90 eSkwela Centers established nationwide and over 130 ALS e-learning modules developed from 2006 to 2011, the Project was turned over to DepEd for institutionalization in April 2021.²⁰

b. Printed modules: In reality, much of the success of the blended learning implementation of the ALS during the pandemic relied on the use of paper. weekly lessons and activities were printed on paper that were then delivered to or picked up by parents and later submitted back to the teachers. This modality is often supplemented by messaging applications to facilitate discussions and clarifications, if needed. While this modality is not sustainable nor desirable in the long run, it provided accessible solutions for learning continuity during the pandemic that surprised all education systems worldwide.

²⁰ Government of the Philippines, Department of Information and Communications Technology. n.d. eSkwela Terminal Report. Manila.

Emerging Technologies

In addition to tried-and-tested good practices, there are new technologies that exhibit significant potential despite still being in the nascent stage of development. The following are a few of these technologies that, if harnessed properly, may also provide benefits for DepEd in the deployment of its PPAs.

Artificial Intelligence (AI): Al will play a pivotal role in helping to realize the promise of personalized learning—the ability to tailor the delivery, content, and pace of learning to the specific needs of each individual student—and learner. The ability to ingest data from multiple data sources, interrogate that data, and derive insights using tools such as predictive analytics and machine learning is what makes AI such an exciting advancement in education technology, and why its use will prove transformational for all stakeholders, from individual students to Ministries of Education.²¹

Blockchain: Blockchain technology has the potential for transfer of value in education systems. Its potential uses include:

- crowding in non-traditional funders to maximize finance for development;
- providing transparent and traceable use of resources;
- developing smart contracts and programmable currency to facilitate resultbased financing; and
- facilitating fast micro-disbursements directly to beneficiaries.²²

However, there is more work to be done before this technology becomes more stable and widely accepted globally.

Micro-credentialing / nano degrees / badges: While these are not ICT solutions per se, these are flexible means of certifying attainment of specific elements of learning, what learners know and can do, or the level of mastery or competence in a specific capability. It can be a trusted credential for holders in transactions such as job applications, recruitment, selection, and even promotion.²³ When partnered with some of the aforementioned technologies discussed, these badges will be widely accessible and useful for learners and employers.

²¹ UNESCO Institute for Information Technology and Education. 2020. *Al in Education: Change at the Speed of Learning*. https://iite.unesco.org/publications/ai-in-education-change-at-the-speed-of-learning/

²² World Bank. 2019, February 22. Blockchain for education service delivery.

²³ Tan, Ma. Melizza. 2021. *Feasibility of Micro-certification in ALS*. Presentation.

9.3 ALS 2.0 ICT Strategic Plan Development Process Creation of Advisory Group

As a major policy document, the ALS 2.0 ICT Strategic Plan requires a multi-stakeholder perspective to be comprehensive. In line with this, aside from consulting with the BAE, a special Advisory Group was formed to provide guidance on the development of the Strategic Plan. The group was comprised of experts at the central, regional and division levels of DepEd. Aside from expertise in ICT, the selected members were well versed in policy and operational details in areas critical to the ALS: curriculum, assessment, planning, MISs, and program implementation at various levels of the bureaucracy.

Desk Review and Initial Consultations

A comprehensive desk review was conducted, and numerous references were synthesized to provide initial direction for the Strategic Plan. However, the main reference material was the UNESCO Bangkok ICT in Education Policy Planning Guide.²⁴ It provided guidance on the steps needed to effectively develop the Strategic Plan. In addition, DepEd and UNICEF sought additional technical assistance from UNESCO on the development of the Strategic Plan.

Discussion on Situational Analysis

After an initial situational analysis was drafted, a series of consultations with the Advisory Group was conducted to identify key points to be highlighted in the Strategic Plan. The issues discussed were not limited to ICT-specific concerns since a comprehensive analysis was sought. The results of these discussions were also consulted with a core group of external stakeholders. This group represented a wide range of ALS partners: local government, other government agencies, universities and colleges, NGOs, private companies, and even private individuals.

Discussion on Program and Project Design

In line with the UNESCO ICT toolkit, and after the situational analysis was refined, another series of discussions were conducted on the actual priorities and contents of the Strategic Plan. This discussion was informed by the SWOT analysis and other pressing considerations from the perspective of both the Advisory Group and the external stakeholders. Here, only ICT-related issues were discussed, and an initial list of priorities were defined.

²⁴UNESCO Bangkok. 2019. UNESCO Bangkok ICT in Education Policy Planning Guide. Bangkok. http://ppg.ictpolicy.guide

Discussion on Monitoring and Evaluation

After the programs and projects were identified, the indicators and targets were formulated. The indicators were set at the Intermediate Outcome level, and baseline data was provided where available. The targets were discussed with both internal and external stakeholders. It is also important to note that the COVID-19 pandemic weighed heavily on the perspectives of most of the people consulted, as it knocked the ALS Program off the good performance trajectory it had before the pandemic.

Discussion on Costing Plan

The UNESCO ICT toolkit also includes a TCO template that allows for easier estimation of investments required to implement the Strategic Plan. Another set of consultations was conducted to determine cost parameters and to determine available resources within DepEd. These were then used in the template based on the activities and the targets. The resulting costs had to be justified, and potential sources of financing had to be identified.

Editing, Design, and Finalization

The ALS 2.0 ICT Strategic Plan was wholly developed through an online or remote setup. Physical meetings were rare and difficult to organize in the Philippines due to the uncertainty in the level of COVID-19 transmission and the need to adhere to minimum public health protocols. As such, there was substantial writing from the UNICEF side, and the draft documents were refined by DepEd. A healthy set of submissions and resubmissions between UNICEF and DepEd was necessary to ensure that all the contents of the Strategic Plan are agreed upon by all authors. The final version of the Plan was submitted to DepEd for official issuance as a policy at a later time.

9.4 ICT for ALS Advisory Group Members (DepEd)

	Name	Designation/Office
1.	G. H. S. Ambat	Assistant Secretary, ALS
2.	Marilette R. Almayda	Director III, Head of ALS Task Force; Officer-in-Charge, Office of the Director IV, BAE
3.	Roderick P. Corpuz	Supervising Education Program Specialist, BAE
4.	Renato A. San Juan, Jr.	Supervising Education Program Specialist, BAE
5.	Jenelyn M. Baylon	Master Teacher I on Detail, BAE
6.	Irene D. Barzaga	Master Teacher II on Detail, BAE
7.	Melissa D. Albino	Supervising Education Program Specialist, BCD
8.	Jerreld Romulo	Senior Education Program Specialist, BEA
9.	Maria Clarisse T. Ligunas	Information Technology Officer III, ICTS-SDD
10.	Ariel C. Tandingan	Information System Analyst III, Planning Services - EMISD
11.	Ricardo M. Tejeresas	Regional ALS Focal Person, Region V - RO
12.	Ray Butch D. Mahinay	Regional ALS Focal Person, Region X - RO
13.	Maricel S. Langahid	Regional ALS Focal Person, Region XI - RO
14.	Levi M. Coronel	Division ALS Focal Person, Region X - Iligan City
15.	Jelyn Joy M. Avelino	Education Program Specialist II for ALS, Region VI - Roxas City
16.	Gilbert G. Turaray	District ALS Coordinator, CALABARZON – Rizal
17.	Georly Mae Q. Dabalos	Mobile Teacher, Region XI - Davao City
18.	Ma. Cristina N. Marquez	Division ICT Coordinator, NCR - Quezon City

9.4 ALS Teachers

	Name	Position	Region	Division
1.	Lorna Calletong	Mobile Teacher	Region I	La Union
2.	Roger Ramos	District ALS Coordinator	Region II	Cagayan
3.	Vhijay Valeriano	Mobile Teacher	Region III	Malolos City
4.	Vincent Cabral	District ALS Coordinator	CALABARZON	Batangas Province
5.	Mia Jara Pintor	District ALS Coordinator	MIMAROPA	Calapan City
6.	Lovelyn Cao	Mobile Teacher	Region V	Naga City
7.	April Lorraine Verdejo	Mobile Teacher	CAR	Baguio City
8.	Kristine Girl Sano	Mobile Teacher	NCR	Muntinlupa City
9.	Cynthia Mingges	Mobile Teacher	Region VI	La Carlota City
10.	Dennis Bayla	Mobile Teacher	Region VII	Cebu City
11.	Alfer Madredijo	Mobile Teacher	Region VIII	Southern Leyte
12.	Charity Epo	Mobile Teacher	Region IX	Dapitan City
13.	Marvilyn Chica	Mobile Teacher	Region X	Cagayan de Oro City
14.	Dennis Anduyan	Mobile Teacher	Region XI	Tagum City
15.	Mary Dee Miguel	Mobile Teacher	Region XII	Cotabato City
16.	Romar Amolo	District ALS Coordinator	CARAGA	Butuan City
17.	Isnaira Haron	District ALS Coordinator	BARMM	Basilan

9.4 ALS Learners

	Name	Region	Division
1.	Rennil Villar Perez/Jogie Hope Patricio	Region I	Vigan City
2.	Arjason Castillo	Region II	Cagayan
3.	Annaliza Ledesma Feliciano	Region III	Bulacan
4.	Darlene Virginie D. Fruelda	CALABARZON	Batangas City
5.	Lorna Salagan	MIMAROPA	Oriental Mindoro
6.	John Kenneth Benico	Region V	Camarines Sur
7.	Jerico Bonifacio	CAR	Baguio City
8.	Reynaldo Lopez	NCR	Valenzuela City
9.	John Lenard Siervo	Region VI	Iloilo City
10.	Evangeline Shalana	Region VII	Cebu Province
11.	Janice Babon	Region VIII	Samar
12.	Jerry Rose Bagawisan Niog	Region IX	Dipolog City
13.	Donna Diamante	Region X	Malaybalay City
14.	Leign Bamie Misa	Region XI	Davao City
15.	Noren Ibrahim	Region XII	Saranggani
16.	Leedian Bautista	CARAGA	Butuan
17.	Mohammad Omar Cauntongan	BARMM	Lanao del Sur I

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9.4 Principals

	Name	School	Region	Division
1.	Romulo Quitevis	Ilocos Sur National High School	Region I	Vigan
2.	Efren Quinan	San Luis Elementary School	Region II	Cagayan
3.	Ruth Felix	Don Antonio Lee Chi Uan Integrated School	Region III	Pampanga
4.	Aurora Lina	Tangway Elementary School	CALABARZON	Lipa City
5.	Reuben Herrera	Marikit Elementary School	MIMAROPA	Palawan
6.	Rowena Baldeo	Federico E. Estipona Memorial School	Region V	Masbate Province
7.	Nixon Elahe	Holy Ghost Extension Elementary School	CAR	Baguio City
8.	Agapito Teodoro Manaog	Kalayaan National High School	NCR	Pasay City
9.	Ricky Pilar	Bo. Obrero National High School	Region VI	Iloilo City
10.	Sofronio Paragoso	Media Once National High School	Region VII	Toledo City
11.	Myriam Veraque	Union Elementary School	Region VIII	Southern Leyte
12.	JR Simed Joseph Saguin	Sulangon National High School	Region IX	Dapitan City
13.	Tito Yungao	West City Central School	Region X	Cagayan de Oro City
14.	Roger Martinez	Tagum City National High School	Region XI	Tagum City
15.	Alver Lajera	KCES 1	Region XII	Koronadal City
16.	Hermiette Lerog	Cabrera-Altres National High School	CARAGA	Surigao City
17.	Paramata Bantuas	Marawi City National High School	BARMM	Marawi City

9.4 Regional Office

	Name	Position	Region
1.	Antonio Laceste	Regional ALS Focal	Region I
2.	Roderick Guinucay	Regional ALS Focal	Region II
3.	Engelbert Agunday	Regional ALS Focal	Region III
4.	Elaine Balaogan	Regional ALS Focal	CALABARZON
5.	Jean Lasquite	Regional ALS Focal	MIMAROPA
6.	Salvado Deyto	Regional ICT Coordinator	Region V
7.	Angela Apupot	Regional ALS Focal	CAR
8.	Charito Villanueva	Regional ALS Focal	NCR
9.	Corazon Aloro	Regional ALS Coordinator	Region VI
10.	Marilyn Miranda	Regional ALS Focal	Region VII
11.	Alfred Café	Regional ALS Focal	Region VIII
12.	Susan Bellido	Regional ALS Focal	Region IX
13.	Ralph Mabulay	Regional ICT Coordinator	Region X
14.	Mary Jeanne Aldeguer	CLMD Chief	Region XI
15.	Emily Enolpe	Regional ALS Focal	Region XII
16.	Josephine Chonie Obsenares	Regional ALS Focal	CARAGA
17.	Jerrylyn Asanti	Regional ALS Focal	BARMM

9.4 Schools Division Office

	Name	Position	Region	Division
1.	Dolores Ubina	Division ALS Focal	Region I	Batac City
2.	Malou Junatas	EPS II for ALS	Region II	Ilagan City
3.	Jean Lintag	Division ALS Focal	Region III	Bataan
4.	Orlando Valverde	CID Chief	CALABARZON	Laguna
5.	Jameston Maranan	EPS II for ALS	MIMAROPA	Calapan City
6.	Johny So	EPS II for ALS	Region V	Sorsogon Province
7.	Shalymar Fesway	EPS II for ALS	CAR	Mountain Province
8.	Emerson Sabadlab	EPS II for ALS	NCR	Paranaque City
9.	Ariel Ballega	Division ICT Coordinator	Region VI	Negros Occidental
10.	Ryan Redoblado	EPS II for ALS	Region VII	Carcar City
11.	Betelino Amigo	EPS II for ALS	Region VIII	Southern Leyte
12.	Catalina Barinaga	Division ALS Focal	Region IX	Dipolog City
13.	Juliet Dolero	Division ALS Focal	Region X	Cagayan de Oro
14.	Delio Caya	EPS II for ALS	Region XI	Tagum City
15.	Princess Cinco	EPS II for ALS	Region XII	Sultan Kudarat
16.	Victor Odtohan	Division ALS Focal	CARAGA	Bislig City
17.	Armando Patagani	Division ALS Focal	BARMM	Maguindanao 2

9.4 Central Office

	Name	Position	Office
1.	Margarita Consolacion C. Ballesteros	Director IV	External Partner Services
2.	Abbygale Molina	TA I	External Partner Services
3.	Crisalyn De Leon	TA I	External Partner Services
4.	Mark Anthony Sy	Head, ICTS-EdTech Unit	ICTS
5.	Marithel Bacsa	SVEPS	BCD
6.	Judy Mendoza	PDO 4	BLR
7.	Sharon Buti	SEPS	BLR
8.	Annaliza Dy	SEPS	BLR
9.	Marietta Publico	SEPS	BLR
10.	Jerreld Romulo	SEPS	BEA
11.	Leila Areola	Director IV	BLD
12.	Pepito Ventura	SEPS	BLD
13.	Jennifer Lopez	Director III	BHROD
14.	Dexter Pante	PDO V	BHROD
15.	Ronald John Inguito	EPS II	Planning Service
16.	Jonathan Diche	AAV	Planning Service
17.	Mildren Panol	TA I	NEAP
18.	Ronilda Co	Director IV	DRRMS
19.	Jose Gabriel Noveno	PDO II	DRRMS
20.	Joan Llamado	TA II	DRRMS
21.	Paulo Aquino	PDO III	DRRMS

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9.4 External Partners

	Organization	Participant Participant			
1.	Civil Society Network for Education Reforms (E-net)	May Cinco, National Coordinator	Daryl Cruz, Research and Communication		
2.	Cebuana	Anna Leah F. Macalintag, Program Development Head			
3.	Tuloy sa Don Bosco	Fr. Marciano "Rocky" G. Evangelista, President and Founder	Fr. Vester Casaclang	Mr. Richard Licup - Tech Voc Inst.	
4.	Emmanuel Community Baptist Church	Pastor Roger Villanueva, Head Pastor			
5.	Arnold Janssen Foundation	Bryan R. Vargas, Asst. Program Coordinator			
6.	Norther Iloilo Polytechnic State College - Barotac Viejo Iloilo Campus	Eva Joy C. Palma, Associate Director Extension Services			
7.	Intellisense Institute of Technology, Inc.	Gregoria Flores, President	Fairlane Rosello - Registrar		
8.	Xavier University	Maria Victoria B. Trinidad, Director	Jerome Torres, Incharge Night School Program		
9.	BJMP – Bayugan	JO2 Joe Decker Frias			
10.	Community and Family Service	Carida Akis, Community Development Officer			
11.	DSWD CALABARZON	Mae Aco, Regional Verification Officer 4Ps	Sheryl Cabrera, Institutional Partnership Development Officer for NGAs		
12.	National Economic and Development Authority	OIC-Dir. Girlie Grace Casimiro-Igtiben	Susan M. Carandang	Yuko Liset R. Domingo	
13.	DICT	ICT Literacy and Competency Development Bureau			
14.	Indigenous Learning System	Preciosa Opiniano	Maribel Seradje	Neljane Galicia	
15.	BJMP - Manila City Jail	JO1 Katrina Belen Manalad			
16.	Cavite State University	Dr. Ammie P. Ferrer, Dean College of Education			
17.	Habi Education Lab	Gerson Abesamis, Learning Experience Designer + Executive Director			

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9.4 ICT Implementers

Organization		Participant Participant
1.	EDC	Maria Theresa Mokamad
2.	Sandiwaan	Fr. Benigno P. Beltran, SVD, President and CEO Sandiwaan Center for Learning
3.	Solar	Eloisa Coloma, General Manager Solar Learning
4.	Thames	Joel Santos, President, Thames International Business School,
5.	DICT (Tech4Ed)	
6.	Smart	Mary Jane Francisco
7.	Edukasyon.ph	Grace David, Hanz Ponceca, TJ Policarpio
8.	Globe	Richie Feria
9.	Googleph	Mary Ann Manzano, Education Lead, Google for Education Philippines
10.	SEAMEO	Philip Purnell



