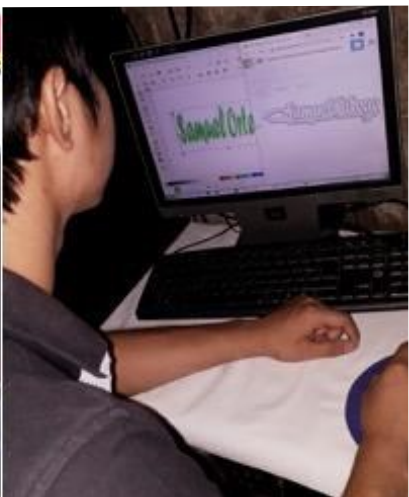




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HIGHER EDUCATION RESPONSE TO COVID-19: A LANDSCAPE MAP OF USAID PARTNER COUNTRIES

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COVERPAGE PHOTOS CAPTIONS AND CREDITS

TOP LEFT: USAID-funded scholarship student at the American University of Beirut, Bilal Wehbi took part in the “Share Your Medicine” initiative organized by the Governorate of Baalbeck Al Hermel. The main objective of this was to collect medicines and distribute them to individuals unable to secure their own, in light of the current health and economic crisis that Lebanon is suffering from. *Photo credit: USAID/Lebanon.*

TOP RIGHT: The Strengthening Higher Education Access in Malawi (SHEAMA) activity focuses on increasing Malawi's skilled and employable workforce – especially rural adolescent girls and young women and vulnerable young men. In response to COVID-19, SHEAMA formed a Distance Learning Taskforce. The taskforce is composed of faculty from across the five public universities and is focusing on ensuring continuity of learning in universities through distance learning amidst the pandemic. *Photo Credit: SHEAMA.*

BOTTOM LEFT: Students at the National Industrial Technical Institute (INTI) third year of software development. INTI instructors adapted the Makerspace area created with the support of USAID, so the students, using their computers from home, could operate the machines and complete practical exercises and finish 3D parts. *Photo credit: USAID/El Salvador.*

BOTTOM RIGHT: USAID-funded scholarship student at the Lebanese American University, Lozane Hamze, joined forces with the LAU Mobile Clinic in collaboration with the LAU Gilbert and Rose-Marie Chagoury School of Medicine through a range of COVID-19 related initiatives. *Photo credit: USAID/Lebanon.*

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ACRONYMS

AAP	Alliance for African Partnership
ASHA	American Schools and Hospitals Abroad Program
AUC	American University in Cairo
CONES	National Council of Higher Education (Consejo Nacional de Educación Superior)
COVID-19	Coronavirus Disease of 2019
E&E	Europe and Eurasia
ES	Education and Social Services
HE	Higher Education
HEI	Higher Education Institution
HICD	Human and Institutional Capacity Development
KNUST	Kwame Nkrumah University of Science and Technology
ICT	Information and Communications Technology
INTEC	Instituto Tecnológico de Santo Domingo
LAC	Latin America and the Caribbean
LAU	Lebanese American University
LUANAR	Lilongwe University of Agriculture and Natural Resources
MENA	Middle East and North Africa
MOE	Ministry of Education
MSPAS	Ministerio de Salud Pública y Asistencia Técnica
NGO	Non-Governmental Organization
NUST	National University of Science and Technology, Islamabad
OP	Operational Plan
OAPA	Office of Afghanistan and Pakistan Affairs
PPE	Personal Protective Equipment
PPP	Public-Private Partnership
PPR	Performance Plan and Report
R&I	Research and Innovation
RAN	Resilient Africa Network
UAE	Université Abdelmalek Essaadi Tanger
UCAD	University of Cheikh Anta Diop de Dakar
UNE	National University of the East (Universidad Nacional del Este)
USAC	Universidad de San Carlos de Guatemala
USAID	United States Agency for International Development
USPCAS	U.S.-Pakistan Centers for Advanced Studies
UVG	Universidad del Valle de Guatemala

I. EXECUTIVE SUMMARY

“Higher Education Institutions have the capacity to be central actors in development by conducting and applying research, delivering quality education, and engaging with communities.”¹

- 2018 USAID Education Policy

USAID’s 2018 Education Policy reflects the belief that a strong higher education (HE) system enhances the development capacity of a country. Further, HE systems in low- and middle-income countries can serve a far greater role than merely acting as a mechanism to provide teaching and learning. Higher education’s expanded role includes, but is not limited to, being: 1) a provider of a public good; 2) a central actor in rapid development through research and innovation; 3) a key partner bridging and convening stakeholders including government and businesses; and 4) a guide for future leaders to link knowledge to development goals. This expanded role is thrown into sharp focus in times of crisis, and with the rampant spread of the COVID-19 virus, higher education has been called to action around the world.

While implementation methods have changed over the years, USAID has historically² sought to work closely with HE systems and higher education institutions (HEIs) to ensure that educational attainment serves as a way to promote upward social mobility, economic growth, and self-sufficiency. COVID-19’s disruptions to HE operations, as well as the virus’ disproportionate effects on the world’s least-resilient institutions, jeopardize HEIs’ capacity to support these learner outcomes and limit the ability of nations to progress along the path to self-reliance. These technical/academic and social aspects of HEIs have become more important than ever during COVID-19, as HEIs are seeking to maximize their capacity to continue supporting learners and their communities. HEIs must have the organizational and institutional capacity to adapt, educate, and function as centers of learning and community-based engagement, despite sudden shocks to the system like the current global pandemic.

This landscape map identifies the actions taken by HE systems and HEIs in select USAID partner countries to respond directly to and mitigate the impacts of COVID-19 on learners, institutions, communities, and countries. This landscape map does not present an analysis of USAID actions to mitigate the impact of the virus, but rather is focused on the actions of the HEIs and HE systems in these partner countries. It is the hope of the research team that this analysis will contribute to the growing knowledge base around COVID-19’s impacts on higher education and development, inform USAID and other donor higher education programming, and potentially orient future lines of research.

To conduct this analysis, two primary pathways of research were identified: the resiliency³ of HE systems, and the role they have played in responding to the COVID-19 crisis. Within each pathway, four

¹ USAID, “USAID Education Policy,” USAID, November 2018,

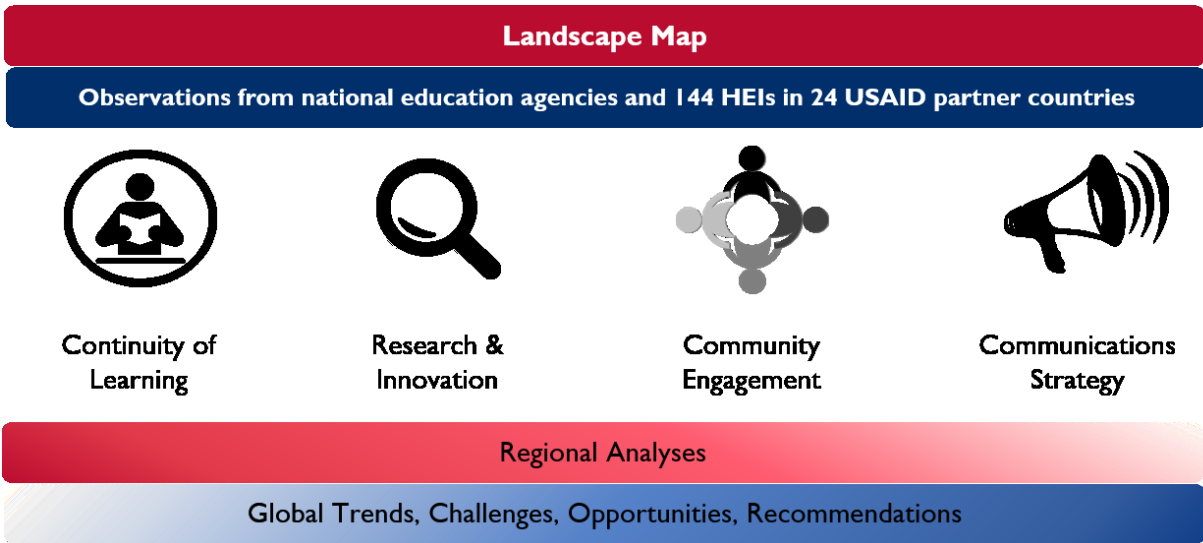
https://www.usaid.gov/sites/default/files/documents/1865/2018_Education_Policy_FINAL_WEB.pdf.

² Morgan McMaster, Alejandra Guevara, Lacey Roberts, and Samantha Alvis, *USAID Higher Education: A Retrospective 1960-2020*, USAID, 2019, <https://www.edu-links.org/resources/higher-education-retrospective-1960-2020>.

³ USAID defines resilience as “the ability of people, households, communities, countries, and systems to mitigate, adapt to, and recover from shocks and stresses in a manner that reduces chronic vulnerability and facilitates inclusive growth.” USAID, “Resilience Resources,” March 13, 2020, <https://www.usaid.gov/resilience/resources>.

key areas of interest emerged: 1) continuity of learning; 2) research and innovation; 3) community engagement; and 4) communications strategy.

FIGURE 1. OVERVIEW OF LANDSCAPE MAP



Methodology and Scope

The landscape map was based on observations from national education agencies and a total of 144 HEIs within 24 countries, with representation from the five regional USAID bureaus: Africa, Asia, Europe & Eurasia (E&E), Latin America & the Caribbean (LAC), and the Middle East & North Africa (MENA). (See Table 2 for summary of countries and HEIs observed.) The countries chosen were USAID partner countries that had recent USAID investments in strengthening HE capacity at the individual, organizational, and/or systems level. This support was inclusive of higher education capacity development work across sectors (e.g. democracy, agriculture, health, education) and irrespective of funding stream. HEIs included in the sample were identified based on a number of criteria detailed in the full report and represent a range of different institutional types (e.g. public versus private; post-secondary vocational training versus university; capital/urban areas versus rural/semi-rural areas).

Global Trends

Synthesizing the data collected as described in the Methodology and Scope section of the full landscape map revealed several global trends of responses by HE systems and HEIs to ensure the continuity of learning during the pandemic and to mitigate the broader impacts of COVID-19.



Continuity of Learning. Governments and HEIs sought to provide distance learning, but faced equity and accessibility challenges due to the pre-existing digital divide, as well as constraints in resources and capacities to fully bridge that gap. Where a dedicated national higher education agency was not established, national education agencies often focused on designing plans and developing resources for primary and secondary education levels, leaving HEIs largely responsible for crafting their own plans.



Research and Innovation. Many HEIs produced locally sourced innovative solutions including personal protective equipment, sanitizing supplies, testing materials, and low-cost ventilators. In fact, in every region, at least one HEI produced locally sourced low-cost ventilators, suggesting ventilators were the top priority for rapid innovation during the COVID-19 crisis. The institutions that successfully produced the ventilators along with other innovative solutions shared a strong precedence of research and innovative capability.



Community Engagement. HEIs supported their local communities by providing public health-focused services including personal protective equipment (PPE), mental health counseling, nutritional kits, and information about nutritional programs and social assistance programs. Community engagement was generally informal and not through established partnerships with non-governmental organizations (NGOs) or non-profits.



Communications Strategy. Official HEI web pages served as sources of information to highlight key documents and news stories. Social media helped to elevate content from official HEI websites as well as breaking news stories. Organization and coordination of communications platforms varied within/across regions.

Regional Analysis

Observations from research conducted on all countries and HEIs as specified within the Scope and Methodology Section were aggregated and codified regionally across each of the report's four key areas of interest. Identification of sub-regional and regional trends and anomalies yields insight into:

- The capacity of examined countries to leverage their national HE system to mitigate the effects of COVID-19 and to respond to future crises;
- The resilience and engagement of HEIs in the local system;
- Actions and initiatives that merit continued monitoring; and
- The potential development of best practices for higher education's role in navigating a crisis.

Exemplary cases at both the national and institutional level are identified and highlighted within the full landscape map region as “spotlights” of best practices in response to COVID-19.

Limitations and Considerations

Given the research methodology and the diverse contexts analyzed in this research, there are several limitations and considerations to take into account when reading this landscape map. In particular, the observations and analyses should be understood within the context of the period of data collection (mid-April to early July 2020) and as a reflection of publicly available data. Further limitations are detailed in the full report.

2. BACKGROUND

COVID-19 Impact on Higher Education

Educational institutions throughout the world, including higher education (HE) systems and higher education institutions (HEIs),⁴ have been affected by the novel coronavirus disease 2019 (COVID-19), a virus first reported in China in December 2019.⁵ As COVID-19 spread rapidly across borders, governments were forced to act to reduce its spread and mitigate its impacts. A decision with significant trade-offs faced by governments and local decision-makers of whether to close educational institutions or to allow them to remain open. While closing educational institutions might benefit public health, a delay or reduction in learning is known to have potentially devastating impacts on educational outcomes for millions of children and youth around the world. Some places attempted to mitigate the impact of closing educational institutions by shifting to alternative learning and teaching methods, for which HE systems and institutions worldwide were generally unprepared.

The trend of higher education institutions closing or severely limiting access to their physical campuses was observed across the globe as a preventative measure to stem the spread of COVID-19. However, the time between the first observed case of COVID-19 in-country and the date campus access was restricted varied greatly between region, country, and HEI. (Annex A documents the speed at which the observed HEIs closed their campuses in relation to the first observed cases of COVID-19 in-country.) This timing played a critical role in the ability of governments, decision-makers, and HE leaders to protect their communities, students, faculty, and staff. It also provides useful insight into how countries and regions differed in their responses.

The disruptions created by COVID-19 in the operations of HE systems are expected to be detrimental in both the short-term and long-term development of USAID partner countries due to the critical role HE systems play in a country's journey to self-reliance. This landscape map identifies the actions taken by HE systems and institutions in select USAID partner countries to explore the **resiliency of HE systems and institutions** and to understand **HE systems and HEIs as central actors in crisis response**.⁶ It is the hope of the research team that this analysis will contribute to the growing knowledge base around COVID-19's impacts, inform USAID higher education programming, and potentially orient future research. An understanding of the inputs and outputs of HE responses to the pandemic during a time of ongoing crisis may further offer USAID an opportunity to develop best

⁴ Per the 2018 USAID Education Policy, an education system consists of the people, public and private institutions, resources, and activities whose primary purpose is to improve, expand, and sustain learning and educational outcomes. A higher education institution is an organization that provides educational opportunities that build on secondary education, providing learning activities in specialized fields. It aims at learning at a high level of complexity and specialization. Higher/tertiary education includes what is commonly understood as academic education but also includes advanced vocational or professional education. It may include public or private universities, colleges, community colleges, academically affiliated research institutes, and training institutes, including teacher training institutes.

⁵ World Health Organization, "Timeline of WHO's response to COVID-19," WHO, September 9, 2020, <https://www.who.int/news-room/detail/29-06-2020-covidtimeline>.

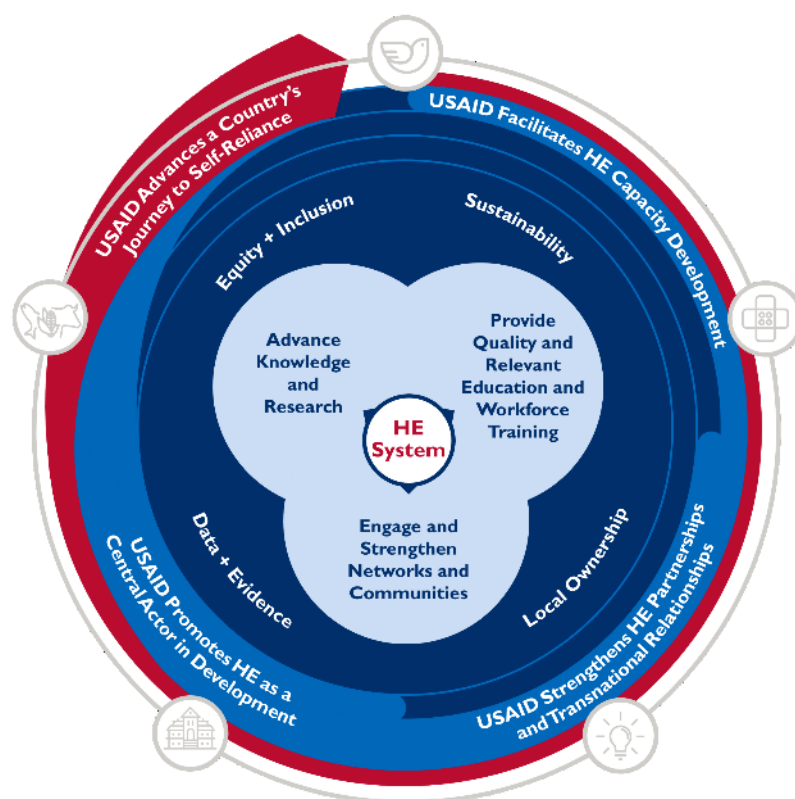
⁶ This landscape map does not present an analysis of USAID actions to mitigate the impact of the virus, but rather is focused on the actions of the HEIs and higher education systems in USAID partner countries.

practices, improve communication, implement partnerships, and ultimately showcase the role of higher education as a central actor in development.

USAID Investment in Higher Education

USAID’s Policy Framework underlines the “Journey to Self-Reliance” as the mission behind strategic and investment decisions.⁷ HE systems are foundational drivers of this journey, and are well-positioned as central actors in capacity development to create productive societies. Their ability to fulfil this role is supported through three primary categories of impact as defined by the [USAID Higher Education Program Framework](#) (Figure 2): advancing knowledge and research; providing quality and relevant education and workforce training; and engaging and strengthening networks and communities.⁸ The importance of this ability is further reinforced by the 2018 USAID Education Policy priority. USAID Higher Education programming is designed to accelerate or improve the development of a country by strengthening its HE system through a range of initiatives that support each of these three impact areas.

FIGURE 2. USAID HIGHER EDUCATION PROGRAM FRAMEWORK



⁷ USAID, “USAID Policy Framework: Ending the Need for Foreign Assistance,” USAID, nd, https://www.usaid.gov/sites/default/files/documents/1870/WEB_PF_Full_Report_FINAL_10Apr2019.pdf. USAID defines self-reliance as the capacity to plan, finance, and implement solutions to local development challenges, and a commitment to see these through effectively, inclusively, and with accountability.

⁸ USAID, “USAID Education Policy,” USAID, November 2018, https://www.usaid.gov/sites/default/files/documents/1865/2018_Education_Policy_FINAL_WEB.pdf.

The inputs, outputs, and outcomes of USAID HE programming were explored in the USAID Higher Education Landscape Analysis.⁹ This analysis served as a formal review of the successes, challenges, and opportunities that must inform future HE programming to successfully achieve development priorities. In examining how USAID programming affected the aforementioned primary impacts, the report finds that the majority of USAID HE engagement can be classified into five areas: partnership, scholarship, institutional capacity strengthening, workforce development, and policy reform (Table 1).¹⁰

TABLE 1. AREAS OF USAID HIGHER EDUCATION PROGRAMMING ENGAGEMENT

AREA	DEFINITION	OPERATIONALIZATION
PARTNERSHIP	U.S. HEI-to-host HEI or organization-to-host HEI partnerships	Research, curriculum, and pedagogy focused programming
SCHOLARSHIP	Financial support to students or faculty	Research, workforce development, or degree/credentialing targets
INSTITUTIONAL CAPACITY BUILDING	Administrative and financial management, faculty development, and quality improvement	Implemented often via partnership or through training organizations
WORKFORCE DEVELOPMENT	Addresses the challenges of industry and university cooperation	Short-term training and education curriculum enhancements
POLICY REFORM	Government and regulatory focused efforts to strengthen higher education systems, promote connections within and outside the higher education system, and eliminate barriers/promote inclusion	Ministry reform and training, establishment of grant institutions, and focus on research

This analysis seeks to improve USAID’s understanding of the current landscape of the institutional capacity of partner country HE systems and HEIs to react to a crisis, to engage with various stakeholder groups, and to develop and promote continuity of learning solutions in the context of an unexpected transition. Mapping the impacts of actions taken at the national and institutional level in these partner countries seeks to better inform future USAID programming decisions and offers an opportunity for the development of best practices.

Development Impacts of COVID-19 vis-à-vis HE Systems and Institutions

USAID’s legacy in advancing a country’s journey to self-reliance through HE programming is “manifested in the achievements and contributions of the individuals and institutions it has supported who have made impacts in three key development areas: building country capacity, advancing social progress, and

⁹ During fiscal years 2014-2018. Jennifer L. Lebrón, Dr. Anne Griffin, and Dr. Robin DePietro-Jurand, “USAID Higher Education: Landscape Analysis 2014-2018,” USAID, November 2019, <https://www.edulinks.org/resources/usaidthighereducationlandscapeanalysis20142018>.

¹⁰ Areas of engagement listed in order of most- to least-commonly implemented in USAID programming. Ibid.

creating economic and social opportunity.”¹¹ The effects of the COVID-19 crisis on the HE system therefore pose a threat to the advancement of these three areas.

Advancing Social Progress

Since the signing of the 1961 Foreign Assistance Act, advancing social progress has been one of USAID’s overarching priorities, and education has been viewed as a key mechanism to achieve this goal.¹² While USAID’s implementation methods have changed over the years, USAID has sought to work closely with HE systems and HEIs to ensure that educational attainment continues to be a way to promote upward social mobility, economic growth, and self-sufficiency. COVID-19’s effects have been disruptive in this sphere, and the disproportionate effects of COVID-19 on the least resilient institutions further place this capacity in jeopardy and limit the ability of nations to progress on their path to self-reliance.

Creating Economic and Social Opportunity

HEIs are purposefully designed to provide learners with the social, technical/academic, and professional skills to gain economic independence and contribute to their communities, encouraging them to increase their social mobility. As the following sections will show, HEIs can play an important role in the communities in which they are located, and they are inextricably tied to society at large. Many HEIs have connections to social and professional organizations that allow learners to benefit from opportunities that they may not have had otherwise, fostering a broader community-oriented awareness. These elements have become more important than ever during the COVID-19 crisis, as HEIs are seeking to maximize their capacity to continue supporting learners and their broader communities amidst a period of global upheaval.

Building Country Capacity (Human and Institutional Capacity Development)

HE systems contribute to both human and institutional capacity-building.¹³ By providing advanced education to future workers, HEIs expand the pool of skilled workers who will not only invest in their preferred industries, but also in their country’s overall capacity for growth and autonomy. HEIs train and develop the future leaders of society, equipping them with the knowledge and understanding necessary to drive sustainable development.¹⁴ HEIs must have the organizational and institutional capacity to adapt, educate, and function as centers of learning and community-based engagement, despite sudden shocks to the system like the current global pandemic.

HEIs’ reactions and adaptations to the COVID-19 crisis can shed light on how each institution uses available resources to interpret this mission to serve as a center of learning, research and innovation, and community-based engagement. COVID-19’s myriad challenges for HEI operating capacity include,

¹¹ Morgan McMaster, Alejandra Guevara, Lacey Roberts, and Samantha Alvis, *USAID Higher Education: A Retrospective 1960-2020*, USAID, 2019, <https://www.edu-links.org/resources/higher-education-retrospective-1960-2020>.

¹² USAID, “USAID History,” May 7, 2019, <https://www.usaid.gov/who-we-are/usaid-history>.

¹³ Capacity is the ability of people, organizations, and society as a whole to manage their affairs successfully. Capacity development is the process of unleashing, strengthening, and maintaining such capacity. Capacity is a form of potential; it is not visible until it is used. USAID, “CBLD-9 Capacity Building Indicator Resource Page,” October 8, 2020, <https://www.usaid.gov/npi/capacity-building-indicator-resources>.

¹⁴ Morgan McMaster, Alejandra Guevara, Lacey Roberts, and Samantha Alvis, *USAID Higher Education: A Retrospective 1960-2020*, USAID, 2019, <https://www.edu-links.org/resources/higher-education-retrospective-1960-2020>.

but are not limited, to: developing continuity of learning initiatives, overcoming technological barriers, adjusting semester deadlines, maintaining funding, and maintaining a positive psychosocial learning environment.

Information on how HEIs have adapted to COVID-19 provides a useful opportunity to examine how their diverse behaviors fit into USAID's capacity development model. To this end, regional and global analyses examine the potential for institution-level adaptations that present potential opportunities for future programming.

3. SCOPE AND METHODOLOGY

The motivation for this landscape map derives from USAID's interest in understanding the role of the HE system and HEIs in USAID partner countries in response to the COVID-19 crisis. Data collection focused on two research pathways: **1) the resiliency of HE systems** and **2) HE systems as a central actor in crisis response**.

With the governance of higher education trending toward greater institutional autonomy, understanding these responses to COVID-19 required data collection beyond the government sphere.¹⁵ A landscape map was selected to best showcase the diverse ongoing and evolving actions undertaken by HEIs and national education agencies across the two research pathways in USAID partner countries within five regions: Africa; Asia; Europe and Eurasia (E&E); Latin America and Caribbean (LAC); and Middle East and North Africa (MENA).¹⁶ This format provides a comprehensive overview of regional trends identified over a defined period of time on HE-related activities in response to the COVID-19 crisis.

Selection Process for Countries and HEIs Examined

Consultation with staff at USAID in Washington (including those within the Office of Education and the Center for Development Research in the Global Development Lab) and education staff in all five Regional Bureaus resulted in an initial selection of 24 sample countries for study. The countries chosen were USAID partner countries that had recent USAID investments in strengthening individual and systems capacity in higher education. This support included HE capacity development work across sectors (e.g. democracy, agriculture, health, education), regardless of funding stream. The number of countries represented per region as well as the number of HEIs per country that have been included as part of this analysis roughly reflect the varying levels of USAID HE investment globally. It is important to again note here that this analysis was not designed to determine how USAID HE programming was responding to COVID-19, but to provide an analysis of how the HE system and HEIs within USAID partner countries were being affected by and responding to the pandemic.

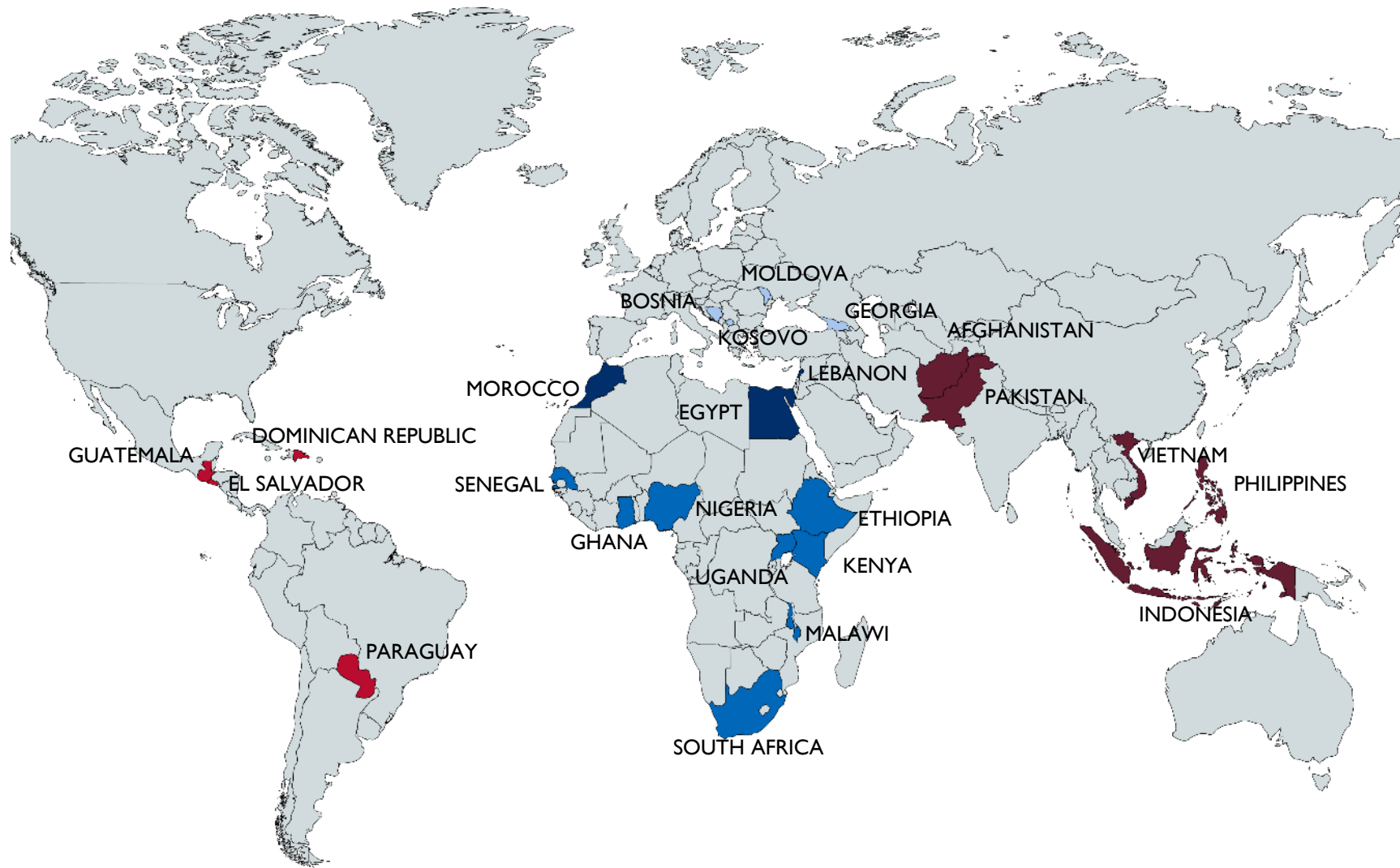
HEIs within the partner countries were identified by utilizing the U.S. Department of State Office of Foreign Assistance indicators related to higher education under the Foreign Assistance Standardized Program and Structure Definitions (SPSD) Education and Social Services (ES) program area - Higher Education (ES.2), the capacity building CBLD-9 standard indicator, and narrative information from the Higher Education Program Narrative and Engagement of Higher Education Institutions Key Issue Narrative Operational Plan (OP) and Performance Plan and Report (PPR). Additional countries were identified by current USAID program and activity managers. The number of HEIs initially identified per

¹⁵ Governance of higher education is often driven by funding and quality assurance mechanisms rather than direct oversight. During normal circumstances, this flexibility in regulation and government openness allows for HEIs to more nimbly respond to evolving labor demands relevant to the local context with flexibility in oversight from national governing bodies or agencies. However, during the COVID-19 crisis, the reduced role of direct national coordination created obstacles for understanding the responses of HEIs within the overall education system to the pandemic. OECD, "Changing Patterns of Governance in Higher Education," in *Education Policy Analysis*, OECD, 2003, <https://www.oecd.org/education/skills-beyond-school/35747684.pdf>.

¹⁶ The Asia region is presented via two sub-regions to ensure more consistent and accurate trends across the vastly differing cultures and economies. The region is split into East Asia and the Pacific (three countries) and South and Central Asia (two countries).

country was based on names of institutions referenced or provided by the above sources. For countries with a large number of HEIs engaged in partnership with USAID, the HEIs were randomly selected to ensure representation of different institutional types (e.g. public versus private, post-secondary vocational training versus university), as well as representation of HEIs in capital or urban areas versus semi-urban or rural areas. The number of HEIs per country ranges from 1 to 12. In total, 144 HEIs from 24 USAID partner countries were identified for this analysis. The national higher education governance and supervisory agencies from within each country examined through the course of research are listed in Annex B and, hereafter in the report, are referred to as government education agencies or national education agencies. Figure 3 (Map) displays the observed countries and Annex A, Table 2 includes all of HEIs by country and region.

FIGURE 3. SUMMARY OF HEIS BY COUNTRY



Key Questions, Evidence, and Insights

Within each of the two research pathways (the resiliency of HE systems and HE as a central actor in responding to the COVID-19 crisis), four key areas of interest emerged: 1) continuity of learning; 2) research and innovation; 3) community engagement; and 4) communications strategy. Research questions were designed to explore the actions and reactions of the HE system and individual HEIs within each of these areas:

1. **Continuity of Learning:** What actions did governments and HEIs in these countries take to ensure continuity of learning amidst the COVID-19 pandemic?
2. **Research and Innovation:** How did the HE system contribute to COVID-19 management within countries and regions through research and innovation?
3. **Community Engagement:** How are HEIs engaging with and supporting their local communities during the pandemic?
4. **Communications Strategy:** In a cross-cutting manner, how did government education agencies and HEIs communicate relevant information about COVID-19 (both regarding its direct and indirect impacts) and institutional responses with key stakeholders?

To answer these questions, the research team compiled data from mid-April to early July 2020 on actions undertaken by government education agencies and HEIs within each of the selected USAID partner countries in response to COVID-19. The research team utilized publicly available resources including, but not limited to: regional and global COVID-19 dedicated dashboards; web pages, social media accounts, and publications of higher education oversight and partnership organizations; web pages, social media accounts, and publications of international development agencies; official websites and social media accounts of HEIs, government education agencies, and student clubs/groups; and local, national, regional, and global news outlets. See Annex C for a list of select international data sources.

Using the USAID HE Program Framework as a guide, research targets were specified within each of the four key interest areas:



Continuity of Learning: Guidelines, policies, plans, or actions intended to facilitate the shift to distance learning¹⁷ and prepare for reopenings of HEIs. These include the expansion of access to the Internet and digital devices and other actions that promote equity and inclusion; holistic support of educators and learners (e.g. academic, psychosocial, and financial support); and the creation of phased reopening plans aligned with public health guidance. The research team sought to identify existing infrastructure/capacity (e.g. an existing contingency plan for

¹⁷ Distance learning is teaching and learning where educators and learners are in different physical spaces. Often used synonymously with distance education, distance learning takes place through one of four modalities: audio/radio, video/television, mobile phone, and/or online learning platforms. Additional resources on delivering distance learning in emergencies can be found at: <https://www.edulinks.org/resources/delivering-distance-learning-emergencies>.

distance learning) to understand the extent to which these investments promote resilience in HE.



Research and Innovation: Technological advancement and innovation in testing (test kits, distribution channels, processing, etc.), equipment (ventilators, isolation facilities, etc.), protective supplies (PPE such as masks, gowns, face shields, etc.), and protocols. COVID-19-related social science research contextualizing the social and economic impact of the pandemic (during and post-pandemic) and the resulting engagement from HEIs, governments, and the public. Funding sources ranging from government, to private sector firms, to HEI administration, to the local community. Partnership and collaboration efforts to advance the capacity of the HEI and its learners.



Community Engagement: Public health support (e.g. local COVID-19 testing, donations of PPE and sanitation products) and non-public health-related support (e.g. donations of nutritional kits, support to the entire education system) provided by HEIs to local communities.



Communications Strategy: Both the mechanisms through which and frequency with which important public health, academic, and logistical information reaches key stakeholders during crisis. In a cross-cutting way, a consistent and accurate communications strategy ensures that HEIs and governments are able to provide an inclusive response to the crisis and promote transparency. The research team also sought to understand the levels of engagement among key stakeholders as a result of effective and clear communication strategies.

Ultimately, data collected from research into each key interest area in all 24 USAID partner countries yields insights into:

1. The identification of trends in actions undertaken; opportunities for crisis response improvement through building institutional capacity and strengthening resilience of HE systems; and challenges limiting the ability of HEIs and government education agencies to do so.
2. The identification of actions and initiatives that merit further monitoring for potential development of best practices for HEIs, USAID operations (including both Washington and Missions), and governments at a regional and global level.

Table 2 illustrates the four key questions and two desired areas of insight.

TABLE 2. KEY RESEARCH QUESTIONS AND POTENTIAL AREAS OF INSIGHT

KEY AREA OF INTEREST	CONTINUITY OF LEARNING	RESEARCH AND INNOVATION	COMMUNITY ENGAGEMENT
RESEARCH QUESTIONS	What actions did governments and HEIs in these countries take to ensure continuity of learning amidst the COVID-19 pandemic?	How did the HE system contribute to COVID-19 management within countries and regions through research and innovation?	How are HEIs engaging and supporting their local communities during the pandemic?
	COMMUNICATIONS STRATEGIES		
	In a cross-cutting manner, how did governments and HEIs communicate relevant information about COVID-19 and the institutional responses with key stakeholders?		
POTENTIAL INSIGHT, ACTION, AND TREND AREAS	The identification of trends in actions undertaken; opportunities for crisis response improvement through building institutional capacity and strengthening resilience of HE systems; and challenges limiting the ability of HEIs and government education agencies to do so.	The identification of actions and initiatives that merit further monitoring for potential development of best practices for HEIs, USAID operations (including both Washington and Missions), and governments at a regional and global level.	

Limitations and Other Considerations

There are significant limitations inherent to research of this type and under the conditions at the time of the analysis that merit mention.

1. **Research time frame:** Data collection took place between mid-April and early July 2020. As collective understanding of COVID-19 management evolved and as the virus affected new areas, mitigating the impacts of the virus has required the implementation of dynamic policies. Thus, by the time this report is published, country and HEI policies may have changed in ways that are inconsistent with the observations made during the development of this report. Observations and conclusions of this report should be understood within the context at the time of data collection.
2. **Data sources:** As described in the Methodology section, data sources for research were limited to publicly available information for a select group of countries and HEIs. The reasons for this approach were two-fold: 1) requesting information, interviews, or access to private communications would delay the analysis and place additional burden on government education agencies and HEIs managing the impacts of COVID-19, and 2) an expedient landscape map likely would be more practical for decision-makers seeking information about the responses to the ongoing and evolving crisis. As a result, this report may not consider actions taken by governments or HEIs that were communicated privately to stakeholders (e.g. via email or text message) or that may not have been widely publicized (e.g. lower visibility for research about the impacts of COVID-19 on non-health-related sectors).

3. **Language:** Despite the collective range of language capabilities of the research team (Amharic, Arabic, English, French, Portuguese, Spanish), several countries published information predominantly in languages that posed challenges for data collection. In these cases, the research team utilized translation software to the extent possible. In the absence of professional translation ability, data collection may not have been fully exhaustive of all publicly communicated actions taken by governments and HEIs.
4. **Stakeholders/perspectives:** The use of publicly available data narrows the range of perspectives from which the efficacy of policies and decisions may be considered. For example, several HEIs demonstrated strong external communications by providing frequent, substantive updates about actions to mitigate the impacts of COVID-19. While this may be indicative of strong management capacity, perspectives from key stakeholders, such as educators and learners, were generally limited or non-existent. Consequently, observations generally relied on outputs.
5. **Time/severity:** Timing of the onset and severity of the COVID-19 pandemic may have influenced the responses within a country or a region. Lessons learned from countries severely affected by the virus earlier than others may have informed the responses of those countries affected later. Furthermore, greater severity may have motivated stronger governmental and institutional responses. As such, trends cited in this report should be understood as observations of responses influenced by myriad factors rather than as a reflection solely of the capacity of governments and/or HEIs.
6. **Regional and local context:** Situational factors may have influenced actions taken and/or communications strategies, complicating drawing comparisons across countries and regions and even within countries.
 1. Technological access: Low Internet connectivity coverage and access to electronic devices may have influenced the investment of resources and/or choices related to alternative education delivery methods. Furthermore, areas with little Internet access likely would not have communicated decisions on official websites nor social media. Generally, this was more characteristic of rural areas than urban ones.
 2. Country income status/fiscal constraints: Governments and HEIs in countries with severe fiscal constraints may not have been able to invest resources to the same extent as other countries (e.g. in expanding Internet access). On the other hand, lower income countries with intense fiscal constraints are often prioritized for development assistance by donor aid, so they may have been able to secure funding to allow certain investments or choices to be considered.
 3. Countries in crisis and conflict: Education systems in countries currently experiencing conflict or that are recently post-conflict face exceptional challenges for responding to the pandemic. War impacts a country's macroeconomy, which places pressure on public

spending.¹⁸ It also affects human capital due to outward migration and the effects of lower public spending on social services, including education.¹⁹ Together, the many consequences of conflict complicate an education system's capacity to mitigate the impacts of a crisis like COVID-19. Similarly, countries affected by other forms of crisis (e.g. displacement, natural disasters, financial crises) must overcome the compounding negative impacts of those previous disruptions and the effects of COVID-19.

4. Governance structures: Beyond responses of HEIs, data collection and analysis of HE systems was limited to the actions at the level of national education agencies. Countries with more decentralized education systems may have had stronger regional responses not observed in this landscape map. Additionally, the governance of private HEIs varies by context. Some national education agencies provide more direct regulatory oversight of private HEIs, while in other cases, oversight is more relaxed and/or entrusted to a quasi-governmental agency. While the actions of private HEIs were collected and analyzed, the actions of agencies distinctly dedicated to the governance of private HEIs were not collected in this research.
5. Cultural context: Cultural norms driven by various factors such as the presence of diverse language groups and/or nationalities, social dynamics, etc. may have influenced the design and implementation of communications strategies in particular. Furthermore, the research team's training and analysis stem from Western models of HE systems. While many HE systems and HEIs follow a similar Western-based model of education, the researchers note this assumption.
6. Regional cooperation: Factors such as cooperation across more linguistically homogeneous regions like LAC may have facilitated information sharing and collaborative strategies to respond to COVID-19.
7. Academic calendar: Countries/regions where the break in the academic year coincided with the onset of COVID-19 may have been able to reduce COVID-19 cases, avoid immediate disruptive changes to institutional operations, and/or increase the time for consideration and planning before resuming the academic calendar.

Inclusion and Equity

COVID-19 has affected all layers of society, particularly those who are the most vulnerable and marginalized. In low- and middle-income countries, this contrast is even more stark. Learners with disabilities, gender minorities, religious minorities, sexual minorities, and refugee and Indigenous populations are among those most affected in the USAID partner countries in this landscape map. Continuity of learning actions targeted to their inclusion or exclusion and support for these marginalized

¹⁸ Phil de Imus, Gaëlle Pierre, and Björn Rother, "The Cost of Conflict," *Finance & Development*, Vol. 54, No. 4, International Monetary Fund, December 2017, <https://www.imf.org/external/pubs/ft/fandd/2017/12/imus.htm>.

¹⁹ Basma Hajir and Hiba Salem, "COVID-19 and conflict: Challenges and hopes for an alternative future in higher education in Syria," Education and Development Forum (UKFIET), May 6, 2020, <https://inee.org/blog/covid-19-and-conflict-challenges-and-hopes-alternative-future-higher-education-syria>.

groups were considered within the purview of this report, however, consistent and relevant information across all regions and countries was not always readily or publicly accessible. Given this limitation, and to avoid either overgeneralization of a global trend or mischaracterization of localized efforts, equity and inclusion efforts are best noted as contextualization of actions and responses within the broader research on higher education system responses rather than as a separate key area of in-depth research and analysis.

Examples of individual exemplary actions undertaken to ensure inclusive post-pandemic education systems and societies:

- Africa: Equity-enhancing policies in South Africa prioritizing low-income students of the National Student Financial Aid Scheme for provision of devices and Internet access.²⁰
 - Asia: Webinars and policy proposals crafted by the Social Work Program of the University of the Philippines Open University focused on proactive protection programs for gender violence.
 - Europe and Eurasia: The University of Pristina in Kosovo initiated an online webinar series to reflect on the responses to COVID-19 in terms of gender norms, human responses, and the role of government.²¹
 - Latin America and the Caribbean: In response to calls from the student union, the National University of the East in Paraguay agreed to award scholarships to under-resourced students facing economic hardship. Selection criteria for scholarship recipients will consider equity among students and departments.²²
 - Middle East and North Africa: The Abdelmalek Essaadi University in Tangier provided free access to all academic databases powered through Elsevier for students who may not otherwise be able to access academic resources.²³
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4. REGIONAL ANALYSIS

Observations from research conducted on all countries and HEIs as specified within the Scope and Methodology Section were aggregated and codified regionally across each of the report's key areas of interest: continuity of learning; research and innovation; community engagement; and communications strategy. Identification of sub-regional and regional trends and anomalies yields insight into the capacity of examined countries to leverage their national HE system to mitigate the effects of COVID-19 or respond to future crises; the resilience and engagement of HEIs in the local system; actions and

²⁰ Simnikiwe Mzekandaba, "Government looks to the skies to boost digital education," itweb.co.za, May 25, 2020, <https://www.itweb.co.za/content/KA3WwqdDoG9qrydZ>.

²¹ Univeristy of Pristina, "Who Am I Now? Reflecting on our responses to global crisis," Univeristy of Pristina, May 18, 2020, <https://www.uni-pr.edu/page.aspx?id=2,4,1125>.

²² National University of the East, "La Une Otorgará Ayudas Económicas A Pedido De La Federación De Centros De Estudiantes," June 17, 2020, <http://www.une.edu.py/web/index.php/facultad-de-ciencias-economicas/1620-la-une-otorgara-ayudas-economicas-a-pedido-de-la-federacion-de-centros-de-estudiantes>.

²³ Abdelmalek Essaadi University, "Articles de recherche sur le Coronavirus disponibles sur Elsevier," <https://www.uae.ma/website/fr/content/articles-de-recherche-sur-le-coronavirus-disponibles-sur-elsevier>.

initiatives that merit continued monitoring; and ultimately, the potential development of best practices for education's role in navigating a crisis.

Exemplary cases at both the national and institutional levels are identified and highlighted within each region as “spotlights” of best practices in response to COVID-19. Spotlights align with the study's four key interest areas of analysis and highlight how USAID programming in the region has contributed to HE responses. The spotlights also identify potential areas for further exploration to increase learning locally, regionally, and/or globally.

Africa

In Africa, the research team analyzed 32 HEIs in eight USAID partner countries: Ethiopia, Ghana, Kenya, Malawi, Nigeria, Senegal, South Africa, and Uganda. Sub-Saharan Africa represents one of the fastest growing continental economies on the globe. However, the overwhelming majority of Africans remain poor. This presents a myriad challenges but also great opportunity in the context of higher education. According to a study conducted by the World Bank, sub-Saharan Africa sees the greatest return on investment to tertiary level education.²⁴ In many contexts, HEIs are also seen as key actors in addressing local and regional development challenges across sectors including agriculture, health, resource development, and governance. These considerations have created a large demand for human capacity development, especially through higher education, a challenge that African HEIs were addressing when COVID-19 pandemic hit.

HEIs in Africa, like those around the world, closed their doors to mitigate the spread of the disease, but many institutions found themselves ill-prepared to migrate teaching online.²⁵ According to UNESCO data, 89 percent of learners in sub-Saharan Africa do not have access to household computers and 82 percent lack Internet access.²⁶ At the same time, the pandemic has also presented higher education systems with the opportunity to create locally led solutions in the form of technological innovations, community communication initiatives, and pandemic response.

²⁴ C.E. Montenegro and H.A. Patrinos, *Returns to Schooling Around the World*, The World Bank, 2013.

²⁵ Sampson Kofi Adotey, “What will higher education in Africa look like after COVID-19?” World Economic Forum, June 8, 2020, <https://www.weforum.org/agenda/2020/06/higher-education-africa-covid19-coronavirus-digital-online/>.

²⁶ UNESCO, “Startling digital divides in distance learning emerge,” UNESCO, April 21, 2020, <https://en.unesco.org/news/startling-digital-divides-distance-learning-emerge>.

USAID Higher Education Programming in Africa

USAID supports higher education in Africa through capacity building of institutions and systems across sectors, as well as support to individuals to pursue degree study.²⁷ Such programs engage primarily through partnerships, often between U.S. HEIs and partner country HEIs to foster local expertise in vital development areas such as food security, health, and natural resource management.²⁸ In Kenya, Ghana, Senegal, and South Africa, USAID supports Regional Learning Centers at HEIs under the Young African Leaders Initiative that engage learners from 49 sub-Saharan African countries. In Malawi and Ghana, USAID invests in partnerships to encourage research and innovation through the Accelerating Local Potential program, as well as increasing capacity for distance learning. Makerere University in Uganda leads the USAID-funded ResilientAfrica Network to strengthen the resilience of communities through research and by nurturing and scaling innovations. In Senegal, USAID engagement with higher education has been primarily focused on agricultural partnerships, such as collaboration with the World Bank in the Forum for Agricultural Research in Africa, and USAID's Education and Research in Agriculture activity. Higher education engagement in Nigeria also highlights how higher education capacity is important to ensure delivery of quality basic education, such as through a partnership at Bayero University in Kano on early grade reading pedagogy and research.²⁹



Continuity of Learning

Governments, through their national education agencies, advised HEIs to shift to distance learning in all eight countries studied within the Africa region. While government capacity was largely limited in terms of support to learners, some in East Africa took centralized action. For example, in Uganda, the Ministry of Education and Sports was able to publish national guidance for e-learning, and in Malawi, the Ministry of Education has been working with partners to find alternative learning platforms.³⁰ In Ethiopia, the Ministry of Science and Higher Education encouraged new online platforms and technologies to provide technical support to students and faculty with visual impairments at universities.³¹ In West Africa, with the support of the National Ministry of Education in Senegal, a television channel dedicated to education was launched to ensure continuity of learning for students

²⁷ “Keringanan UKT, Ratusan Mahasiswa Undip Dapat Pulsa Internet 10 GB,” *IDN Times Jateng*, May 2020, <https://jateng.idntimes.com/news/jateng/fariz-fardianto/keringanan-ukt-ratusan-mahasiswa-undip-dapat-pulsa-Internet-10-gb>; Vietnam National University, Hanoi, “How are VNU-IS students “equipped” during the Covid-19 pandemic?,” January, 9, 2020, <http://www.vnu.edu.vn/ttsk/?C2422/N25661/How-are-VNU-IS-students-%E2%80%99Equipped%E2%80%99D-during-the-Covid-19-pandemic?.htm>.

²⁸ Fogarty International Center, “USAID devotes \$12m to bolster higher education in Africa,” November/December 2010, <https://www.fic.nih.gov/News/GlobalHealthMatters/Dec2010/Pages/usaids-africa.aspx#:~:text=USAID%20is%20devoting%20about%20%2412,African%20universities%20with%20U.S.%20partners>.

²⁹ USAID, “USAID Collaboration with Nigeria’s Bayero University in Kano Strengthens Early Grade Reading in Nigeria,” USAID, August 11, 2020, <https://www.usaid.gov/nigeria/news/usaids-collaboration-nigeria%E2%80%99s-bayero-university-kano-strengthens-early-grade>.

³⁰ Alex Kakooza, “Continuity of Learning During COVID 19 Lockdown,” Ministry of Education and Sports, Circular No. 05/2020, April 20, 2020, <http://www.education.go.ug/wp-content/uploads/2020/04/circular.pdf>.

³¹ Ministry of Science and Higher Education, Ethiopia, June 18, 2020, <https://www.facebook.com/SHE.Ethio/photos/a.1966626250310496/2382484708724646/?type=3&theater>.

without Internet connection.³² The Department of Higher Education, Science, and Technology of South Africa negotiated favorable rates with mobile network operators to ensure that economically disadvantaged students had access to the Internet.³³

Across the region, access to technology was a challenge for the continuity of education goals. HEIs often took the lead in addressing this challenge, initiating solutions for students to gain access to distance learning modalities. HEIs across the sub-regions had unique ways of solving accessibility to technology issues. The University of Cheikh Anta Diop de Dakar (UCAD) in Senegal developed a new institutional policy that encouraged distance learning and information and communications technology (ICT) driven education.³⁴ In addition to this, UCAD provided additional equipment to faculty, and launched a new online platform for training and teaching.³⁵ The University of South Africa provided laptops to students in need.³⁶ Additionally, Kenyatta University in Kenya, Ashesi University in Ghana, and Hawassa University in Ethiopia utilized existing e-learning platforms for access to student portals and courses.³⁷

However, even for HEIs with existing distance learning platforms, students continued to face technical difficulties while navigating the transition to effective distance learning. Technological infrastructure issues across HEIs limited access to dependable and consistent Internet. To combat this challenge, Lilongwe University of Agriculture and Natural Resources (LUANAR) in Malawi leveraged its existing network with the Alliance for African Partnership (AAP) to collaborate with other HEIs in Africa in order to develop technology interventions for improving technology infrastructure.³⁸ AAP partners are investigating the viability of creating common online modules for subjects relevant to students across partner institutions, as well as training for faculty to build capacity around delivering online teaching and assessment.³⁹

Another acute challenge faced by HEIs in Africa was supporting and providing tools for faculty and staff to shift to distance learning. Despite this challenge, Ashesi University supported faculty by providing teaching guidance for online instruction.⁴⁰ University of Centre Africain d'Etudes Supérieures en Gestion

³² UNESCO, "The response of Higher Education to COVID-19 - Higher Education in Africa: challenges and solutions through ICT, online training, distance education and digital inclusion," UNESCO, May 14, 2020, <https://fr.unesco.org/news/reponse-lenseignement-superieur-covid-19-lenseignement-superieur-afrique-defis-solutions>.

³³ Simnikiwe Mzekandaba, "Government looks to the skies to boost digital education," itweb.co.za, May 25, 2020, <https://www.itweb.co.za/content/KA3WwqdDoG9qrydZ>.

³⁴ University of Cheikh Anta Diop de Dakar, <http://www.drtp.ucad.sn/#>.

³⁵ <http://www.mesr.gouv.sn/appui-aux-universites-en-infrastructures-le-mesri-livre-les-premiers-lots-a-l-ucad/>

³⁶ University of South Africa, "Delivery of laptops to NSFAS student," June 4, 2020, <https://www.unisa.ac.za/sites/myunisa/default/Announcements/Delivery-of-laptops-to-NSFAS-students>

³⁷ Kenyatta University, "Digital Learning Platform," <https://kusoma.ku.ac.ke/lms/>; <https://www.ashesi.edu.gh/resources/covid-19-safety/online-classes.html>; <https://sis.hu.edu.et/>.

³⁸ Sharon Dell, "African Universities Look to Partnerships to Boost ICT Capacity," IPPMedia.com, June 2, 2020, <https://www.ippmmedia.com/en/features/african-universities-look-partnerships-boost-ict-capacity>.

³⁹ Ibid.

⁴⁰ Ashesi University, "The Stories of Ashesi's Students and Alumni," <https://outcomes.ashesi.edu.gh/>; <https://www.ashesi.edu.gh/resources.html>.

in Senegal revised their continuity of learning pedagogy systems by holding contact sessions with professors and students to redefine course objectives.⁴¹



Research and Innovation

Many of the HEIs in Africa expanded beyond efforts to safeguard learning continuity to also pursue research and innovations meant to mitigate impacts of the COVID-19 crisis. HEIs supported the pandemic responses of the healthcare sector while simultaneously supporting research and technology advancements to improve infrastructure and strengthen capacity.

The most prevalent response of HEIs across the African region in supporting the healthcare system was the creation of new medical equipment, especially equipment suited to the local context or that used locally available materials, considering the often-disrupted global supply chain. In East Africa, Bahir Dar University in Ethiopia created an infrared thermometer and pulse meter to measure the heart rate of COVID-19 patients.⁴² Kenyatta University developed inexpensive and locally sourced ventilators for local hospitals.⁴³ Malawi Polytechnic created low-cost materials and equipment such as ventilators, plastic face shields, and 3D-printed reusable face masks.⁴⁴ Makerere University, through the ResilientAfrica Network, created a portable housing tent called Epitent for emergency health care and isolation needs.⁴⁵ Other responses included HEIs converting their campuses into testing sites and laboratories. In West Africa, University Gaston Berger in Senegal used its campus as a lab for local hospitals, while Bayero University of Kano in Nigeria used its campus as a testing site for university students.⁴⁶

Innovation in Africa was not only limited to health care. HEIs worked with national governments to support research. For example, the Ministry of Science and Higher Education in Ethiopia signed an agreement with the Institute of Technology and Innovation for Human Development to create a link between human resource development, technology transfer, and research.⁴⁷ Similarly, HEIs in South Africa supported the government and other sectors through their COVID-19 research.⁴⁸ The University

⁴¹ Aboudou Ouattara, "Revision Du Dispositif De Continuite Pedagogique Au Cesag," Note d'Information N° CESAG/DFIP/NI/2020-03-002, Centre Africain D'etudes Superieures En Gestion, April 8, 2020, https://www.cesag.sn/images/CESAG-DFIP-Note_dinformation_continuit_pedagogique.pdf.

⁴² Bahir Dar Institute of Technology, <https://bit.bdu.edu.et/node/556>.

⁴³ Margaret Kalekye and Sarafia Robi, "Covid crisis drives Kenya's innovation," Kenya Broadcasting Corporation, April 11, 2020, <https://www.medicestafrica.com/en/overview/news-and-articles/covid-crisis-drives-kenya-innovation.html>.

⁴⁴ Hazviperi Mbizi, "Poly Helps in Fighting COVID19," University of Malawi, April 17, 2020, <https://www.poly.ac.mw/news/poly-helps-in-fighting-covid19-17-04-2020>.

⁴⁵ Kwame Nkrumah University of Science and Technology, "KNUST Management Establishes Isolation and Treatment Centres for Staff and Students," KNUST, April 21, 2020, <https://news.mak.ac.ug/2018/02/epitent-limited-portable-habitation-solutions>.

⁴⁶ Bayero University, "BUK's Test Centre for Covid-19 World Class.....Says NCDC," Bayero University, May 3, 2020, <https://buk.edu.ng/?q=node/299>;
<http://aps.sn/actualites/societe/sante/article/saint-louis-l-ugb-s-engage-dans-la-production-de-gel-hydro-alcoolique>.

⁴⁷ Ministry of Science and Higher Education – Ethiopia, "An agreement has been decided to create human wealth development, technology transition and research ties," Ministry of Science and Higher Education, June 11, 2020, https://www.facebook.com/SHE.Ethio/posts/2377414089231708?_tn=-R.

⁴⁸ University of South Africa, "Graduate School of Business Leadership News & Events," <https://www.unisa.ac.za/sites/sbl/default/News-&-events>.

of South Africa hosted research events to discuss the impacts of COVID-19.⁴⁹ Makerere University received new funding to support COVID-19 research through the Research and Innovation Fund in Uganda.⁵⁰



Community Engagement

Many HEIs in Africa engaged with their surrounding communities through resource distribution and public health assistance. In East Africa, Kenyatta University retasked a geographic information system (GIS) lab on campus to provide daily COVID-19 updates to the community.⁵¹ Bahir Dar Polytechnic College in Ethiopia distributed hand-washing technology and face masks for healthcare workers and economically disadvantaged workers.⁵² Malawi Polytechnic created health care products such as an iCare Device used to detect fever during labor for pregnant women for community use.⁵³ Makerere University organized a public dialogue on COVID-19 in collaboration with Uganda's Ministry of Health and the World Health Organization to provide public health advice for the community.⁵⁴ In West Africa, Kwame Nkrumah University of Science and Technology (KNUST) in Ghana provided isolation and treatment centers.⁵⁵ Bayero University of Kano donated a GeneExpert Machine for COVID-19 testing to the Center for Infectious Diseases Research.⁵⁶

Although the majority of community engagement across the sub-region focused on public health needs, some HEIs turned their attention to assisting communities as a whole. In West Africa, students at Gaston Berger University in Senegal led fundraising activities to raise money for their community.⁵⁷ In East Africa, Bahir Dar University and Mekelle University in Ethiopia donated food to their

⁴⁹ Douglas Boaten, "The cunning and elusive coronavirus and the Covid-19 disease that gave the world a wake-up call," University of South Africa, <https://www.unisa.ac.za/sites/sbl/default/News-&-events/Articles/The-cunning-and-elusive-coronavirus-and-the-Covid%E2%80%9319-disease-that-gave-the-world-a-wake%E2%80%93up-call>.

⁵⁰ UK Research and Innovation, "New funding supports COVID-19 research in Uganda," UKRI, nd, <https://www.ukri.org/research/coronavirus/our-global-contribution/new-funding-supports-covid-19-research-in-uganda/>.

⁵¹ Kenyatta University Geospatial Information Technology Lab, "Mapping Covid-19 spreading pattern in Kenya," <http://gislab.ku.ac.ke/>.

⁵² Bahirdar Poly Technic College, "Hand-touching technology," Facebook October 26, 2020, https://www.facebook.com/permalink.php?story_fbid=1377142699138428&id=847103132142390.

⁵³ The Malawi Polytechnic, "Equipment and Materials," Facebook, May 11, 2020, <https://www.facebook.com/polymw/photos/a.1269080723233251/1729309853877000/?type=3&theater>.

⁵⁴ Makerere University, "Public Dialogue on the Coronavirus Disease (COVID-19)," Makerere University, nd, <https://www.mak.ac.ug/slide/public-dialogue-coronavirus-disease-covid-19>.

⁵⁵ Kwame Nkrumah University of Science and Technology, "KNUST Management Establishes Isolation and Treatment Centres for Staff and Students," KNUST, April 21, 2020, <https://news.mak.ac.ug/2018/02/epitent-limited-portable-habitation-solutions>.

⁵⁶ Bayero University, "BUK Launches GeneXpert Machine for Covid-19 Testing," BUK, June 6, 2020, <http://buk.edu.ng/?q=node/306>.

⁵⁷ Moïse Diedhiou, "Students at Gaston Berger University Share Their Thoughts on COVID-19 and Racism," Critical Investigations into Humanitarianism in Africa Blog, <http://www.cihablog.com/students-at-gaston-berger-university-share-their-thoughts-on-covid-19-and-racism/>.

communities.⁵⁸ The vice chancellor and vice principal of University of South Africa donated a portion of their salaries to a COVID-19 solidarity fund to support their community.⁵⁹



Communication Strategy

Widespread social media usage was a defining characteristic of how HEIs in Africa communicated information to students, faculty, and the surrounding communities.

Across the sub-regions, many HEIs used their existing social media presence to provide updated information regarding coursework and campus life for students and faculty. In East Africa, Makerere University used their Twitter and Facebook accounts to share distance learning resources and to highlight specific choices made by faculty to create accessible information (see spotlight). In West Africa, UCAD took an extra step by using text messages to communicate with students in addition to updating the institutional Facebook account.⁶⁰

Spotlight on Uganda: ResilientAfrica Network (RAN) - Makerere University



Makerere University in Uganda has strong engagement with USAID through the ResilientAfrica Network, a partnership, led by Makerere, comprising 20 universities across 16 African countries.⁶¹ The initiative seeks “to strengthen the resilience of communities in Africa through university-led, local innovative solutions using evidence-based approaches.”⁶² Makerere University’s exceptional communications strategy during the COVID-19 pandemic

demonstrates its commitment to the goals of the RAN initiative. The university organized a highly navigable and informative Coronavirus Resource Center on its website. The home page integrates statistics from the national Ministry of Health and the Johns Hopkins University Coronavirus Resource Center. In addition, separate pages are dedicated to news/announcements, Makerere’s research initiatives, and public health resources. The range and presentation of this information emphasizes the importance of applying and further developing evidence-based approaches and the value of communicating these initiatives and results to increase research engagement and adherence to public health guidance.

In addition to social media, HEIs in Africa used their official websites to announce new research projects undertaken by students and faculty, as well as community outreach events. For example, Ashesi University’s website announced that the engineering department was awarded Seeding Labs Instrument

⁵⁸ Mekelle University, “Photos,” Facebook, May 22, 2020, https://www.facebook.com/MekelleUniversity/posts/2945476585546499?_tn_=-R; Bahir Dar University, “Photos,” Facebook, May 12, 2020, https://www.facebook.com/bduethiopia/posts/3588701661145314?_tn_=-R.

⁵⁹ University of South Africa, “Unisa Vice Chancellor and vice principals pledge to contribute to the Covid-19 Solidarity Fund”, April 17, 2020, <https://www.unisa.ac.za/sites/corporate/default/News-&Media/Announcements/Unisa-Vice-Chancellor-and-vice-principals-pledge-to-contribute-to-the-Covid%E2%80%9319-Solidarity-Fund>.

⁶⁰ Karen MacGregor, “Dealing with a fraught present, planning for an unknown future,” University World News, May 7, 2020, <https://www.universityworldnews.com/post.php?story=20200506080435479>.

⁶¹ USAID, “Makerere University - ResilientAfrica Network (RAN),” USAID, October 18, 2016, <https://www.usaid.gov/hesn/fact-sheets/makerere-university-resilientafrica-network-ran>.

⁶² Ibid.

Access to improve their scientific equipment.⁶³ KNUST used the official school website to share stories of community outreach events such as food donation to international students at the university.⁶⁴ In Ethiopia, Hawassa Polytechnic College announced its new motorbike ambulance service for community use on their Facebook page and official website.⁶⁵

It is particularly important to note that many government education agencies across the Africa region also utilized official social media accounts to update the public on educational closures and share public health guidance to which HEIs should adhere. However, both HEIs and government education agencies in Africa struggled to maintain consistent updates. This challenge can be attributed to the different capacities and resources available and the rapidly evolving situation.

Asia

Asia contains more than half of the world's population, as well as some of the fastest-growing countries and economies.⁶⁶ Across the Asia region, there is generally a strong government influence over public higher education systems and, thus, education-specific responses often aligned with government responses across other sectors. However, since incomes, economic makeups, and cultures vary substantially across countries within the Asia sub-regions, compiling trends of COVID-19 responses by HEIs from within five selected countries in the Asia region may not fully represent continental trends nor present the most accurate patterns within sub-regions due to localized context. In this document, the Asia region is thus divided into two sub-regions: Indonesia, Philippines, and Vietnam are classified as East Asia and the Pacific, and Afghanistan and Pakistan are classified as South and Central Asia.

⁶³ External Relations Office, "Seeding Labs award brings boost to scientific research and learning at Ashesi," Ashesi University, June 22, 2020, <https://www.ashesi.edu.gh/stories-and-events/stories/3706-seeding-labs-award-brings-boost-to-scientific-research-and-learning-at-ashesi.html?fbclid=IwAR0O8QMDBCJoeXWsxXxIk15UyHZ0zb-wBtz6FE-oyTWz5aGlZjsSKZ-f2nA>.

⁶⁴ Kwame Nkrumah University of Science and Technology, "KNUST Management, ISA And SRC Donate Food Items To International Students," KNUST, April 29, 2020, <https://www.knust.edu.gh/news/news-items/knust-management-isa-and-src-donate-food-items-international-students>.

⁶⁵ Hawassa Polytechnic College, "Photos," Facebook, April 16, 2020, https://www.facebook.com/permalink.php?story_fbid=128936105388946&id=100280804921143.

⁶⁶ USAID, "Asia Regional," USAID, September 23, 2020, <https://www.usaid.gov/asia-regional>.

USAID Higher Education Programming in Asia

USAID HE investment in the Asia region has focused heavily on both individual and institutional capacity building and policy reform. HEIs have additionally been encouraged to increase the quality of instruction, develop practical and applicable research, and ensure that community engagement remains a priority.⁶⁷ Additionally, HE programming in Afghanistan and Pakistan works to promote stability, economic development, and security within the region.⁶⁸

In Vietnam and the Philippines, USAID supports innovation, technology, and engineering curriculum building and application through the BUILD-IT Alliance (Building University-Industry Learning and Development through Innovation and Technology⁶⁹), HEEAP initiative (Higher Engineering Education Alliance Program⁷⁰), and STRIDE program (Science, Technology, Research, and Innovation for Development).⁷¹ In Vietnam and Indonesia, USAID further supports the development of the HE sector and future national leaders through the establishment of the first independent non-profit university in Vietnam, Fulbright University,⁷² as well as the YouthPH Initiative⁷³ and PRESTASI.⁷⁴

In Afghanistan and Pakistan, USAID promotes increased enrollment in HEIs and development of workforce-critical skills among learners and faculty leaders, particularly among female and other minority groups, through the University Support And Workforce Development Program (USWDP),⁷⁵ Higher Education Development Project (HEDP),⁷⁶ Advancing Higher Education for Afghanistan's Development (AHEAD), and the Merit and Needs-Based Scholarship program.⁷⁷ Further administrative and training support is provided for programmatic and education

⁶⁷ Jennifer L. Lebrón, Dr. Anne Griffin, and Dr. Robin DePietro-Jurand, "USAID Higher Education: Landscape Analysis 2014-2018," USAID, November 2019, <https://www.edu-links.org/resources/usaaid-higher-education-landscape-analysis-2014-2018>.

⁶⁸ Many of the activities are earmarked to "Strengthen institutional capacities of public and private higher education institutions (including research institutes, teacher-training colleges and institutes, universities, community colleges, and the relevant officials, departments, and ministries responsible for higher education) to teach, train, conduct research, and provide community service; to contribute to development; and to promote professional development opportunities, institutional linkages, and exchange programs." USAID, "Foreign Aid Explorer," USAID, April 23, 2020, <https://explorer.usaid.gov/query>.

⁶⁹ BUILD-IT is characterized by public private partnerships, academic and administrative training, and the development of Maker Innovation Spaces for hands-on student to technology engagement. BUILD-IT, "Activities," USAID and Arizona State University, nd, <https://builditvietnam.org/activities>.

⁷⁰ HEEAP engages faculty members and administrators through training programs to innovate upon curricula, offer private partnerships, and promote hands-on learning and technical communication. Higher Engineering Education Alliance Program, "Who We Are," HEEAP, nd, <https://heeap.org/who-we-are>.

⁷¹ "The vision of the STRIDE program is that by the end of the five-year period, collaborative innovation will flourish, with universities and industries working together sustainability to support Philippine prosperity." STRIDE, "Science, Technology, Research and Innovation for Development (STRIDE) Program," USAID and RTI, nd, <https://stride.org.ph/about-us/>.

⁷² USAID, "Fact Sheet: Fulbright University Vietnam (FUV) Support," USAID, June 19, 2020, <https://www.usaid.gov/vietnam/documents/fact-sheet-fulbright-university-vietnam-fuv-support>.

⁷³ Philippine Business for Education, "YouthWorksPH," PBEd, nd, <https://www.pbepd.ph/youthworksph>.

⁷⁴ USAID's Program to Extend Scholarships to Achieve Sustainable Impacts (PRESTASI) provided scholarships to 357 Indonesians from 2011 through 2020. An additional 1,280 Indonesians participated in short-term training programs with USAID PRESTASI support. USAID, "USAID Program to Extend Scholarships and Training to Achieve Sustainable Impacts (PRESTASI), Phase III," USAID, nd, <https://www.iie.org/Programs/USAID-PRESTASI>.

⁷⁵ USAID, "University Support and Workforce Development Program (USWDP)," USAID, May 15, 2019, <https://www.usaid.gov/node/96081>.

⁷⁶ USAID, "Higher Education Development Project (HEDP)," USAID, May 15, 2019, <https://www.usaid.gov/news-information/fact-sheets/higher-education-development-project-hedp>.

⁷⁷ USAID, "Merit and Need Based Scholarship Program," December 19, 2019, <https://www.usaid.gov/news-information/fact-sheets/merit-and-need-based-scholarship-program-mnbsp>.

system strengthening efforts at the American University of Afghanistan (AUAF)⁷⁸ and through the SEA II (Strengthening Education In Afghanistan) program.⁷⁹ Partnership with the United States Institute of Peace (USIP) has led to further curricula innovation and a focus on civic engagement of the youth workforce.

East Asia and the Pacific

While Indonesia, the Philippines, and Vietnam do not constitute a perfect cross-section of all COVID-19 related initiatives undertaken in the region, they do form a highly useful triumvirate. All three nations are classified as members of the Asia Pivot priority nations (along with India).⁸⁰ For this research, 33 HEIs were examined across the three countries, with 24 classified as public institutions and the remaining nine as private entities.

Higher education enrollment as a percentage of the eligible national population has been increasing steadily in the region since the 1990s. However, excluding high income economies, East Asia and the Pacific still underperforms compared to the OECD average for enrollment by nearly 30 percent, with the three countries examined within this report underperforming by even more.⁸¹ The regional average enrollment rate is drastically reduced by the presence of multiple nations with enrollment rates of 20 percent or lower. Taking this into account, the nations examined herein do not dramatically underperform the regional average and can be viewed as reasonable proxies for the region as a whole.

East Asia and the Pacific was one of the earliest regions to be affected by COVID-19 with confirmed cases in Vietnam in January 2020. Notably, that country demonstrated a strong and concerted effort in controlling COVID-19. Government coordination, rapid case detection and isolation, aggressive contact tracing, and strict quarantine measures allowed the nation's HEIs to reopen in May 2020, earlier than any other country studied herein. And while this early release from the effects of COVID-19 demonstrates a strongly positive country response to the virus, in the context of this analysis, the short time period to develop HEI initiatives offers limited evidence. While the Philippines and Indonesia are regional neighbors to Vietnam, it does not seem that local responses to the virus were imitated despite the earlier impact in Vietnam.



Continuity of Learning

COVID-19 forced HEI campus closures across the region from early February through late March 2020, and with these closures came a dramatic shift toward distance learning.

⁷⁸ USAID, "American University of Afghanistan (AUAF)," USAID, May 7, 2019, <https://www.usaid.gov/news-information/fact-sheets/american-university-afghanistan-auaf>.

⁷⁹ USAID, "Strengthening Education in Afghanistan (SEA II)," USAID, May 15, 2019, <https://www.usaid.gov/news-information/fact-sheets/strengthening-education-afghanistan-ii-sea-ii>.

⁸⁰ Jennifer L. Lebrón, Dr. Anne Griffin, and Dr. Robin DePietro-Jurand, "USAID Higher Education: Landscape Analysis 2014-2018," USAID, November 2019, <https://www.edu-links.org/resources/usaids-higher-education-landscape-analysis-2014-2018>.

⁸¹ Indonesia = 36 percent (2018), Philippines = 35 percent (2017), and Vietnam = 29 percent (2016) East Asia and the Pacific (excluding high income countries) had a 44 percent higher education enrollment rate as of 2018. UNESCO Institute for Statistics, "School enrollment, tertiary (% gross) - United States, OECD members, Vietnam, Indonesia, Philippines, East Asia & Pacific (excluding high income)," World Bank Data, nd, https://data.worldbank.org/indicator/SE.TER.ENRR?locations=US-OE-VN-ID-PH-4E&name_desc=false.

HEIs both across and within countries handled this transition differently, and the capacity of HEIs to be both adaptable and resilient was thrust into the spotlight. Those with existing ICT capacity and infrastructure, such as the University of Gadjah Mada in Indonesia,⁸² Hanoi University of Science and Technology in Vietnam,⁸³ and the University of the Philippines,⁸⁴ were able to quickly and seamlessly restart within this new learning modality. Through partnerships with technology platforms including Zoom, Google, and Microsoft Teams, many more HEIs were able to establish new online presences for learner and educator engagement.⁸⁵ Library resources, campus services, and communications were among the first elements of the academic experience to be brought into this new online environment.

Most HEIs studied expect distance learning to remain a part of the learner experience moving into the coming academic year (despite the reopening of Vietnamese institutions in May 2020). The Cebu Institute of Technology in the Philippines launched a new initiative titled “Made4Learning, Made for Learners,” through which they set out plans for how best to reach their traditional and atypical recruitment audiences and to ensure uninterrupted quality education moving forward.⁸⁶ Additionally, the pandemic has served as an opportunity for many HEIs to assess their preparedness in training the national workforce for the future of work in the digital age. This readiness to engage with the Fourth Industrial Revolution has prompted faculty research and spurred national education agency policy reform.⁸⁷

Internet access, strength, and consistency concerns from learners at HEIs in East Asia and the Pacific have limited the effectiveness of the transition online, though many HEIs included in this analysis have recognized this and attempted to implement initiatives to address these difficulties. Many HEIs have explored partnerships with local telecommunications firms and Internet providers to increase Internet

⁸² Universitas Gadjah Mada, “Selamat datang di eLOK,” Universitas Gadjah Mada, nd, <https://elok.ugm.ac.id/>.

⁸³ Viet Nam News, “Online training should be promoted: Ministry,” Viet Nam News, April 18, 2020, <https://vietnamnews.vn/society/715445/online-training-should-be-promoted-ministry.html>.

⁸⁴ University of the Philippines Open University, “Resources on Remote Learning, Teaching, and Working,” UP Open University, nd, <https://www.upou.edu.ph/covid19updates/resources-on-remote-learning-teaching-and-working/>.

⁸⁵ Partnership with Microsoft allowed educators and learners in Vietnam and the Philippines to rapidly adjust to distance learning since early May. Microsoft Asia News Center, “Teaming up to transform education in Asia,” Microsoft, June 9, 2020, <https://news.microsoft.com/apac/2020/06/09/teaming-up-to-transform-education-in-asia/>.
⁸⁶ <https://cit.edu/made4learning-made4learners/>

⁸⁷ The World Economic Forum refers to the Fourth Industrial Revolution as a “fundamental change in the way we live, work and relate to one another. It is a new chapter in human development, enabled by extraordinary technology advances commensurate with those of the first, second and third industrial revolutions. These advances are merging the physical, digital and biological worlds in ways that create both huge promise and potential peril. The speed, breadth and depth of this revolution is forcing us to rethink how countries develop, how organisations create value and even what it means to be human. The Fourth Industrial Revolution is about more than just technology-driven change; it is an opportunity to help everyone, including leaders, policy-makers and people from all income groups and nations, to harness converging technologies in order to create an inclusive, human-centred future. The real opportunity is to look beyond technology, and find ways to give the greatest number of people the ability to positively impact their families, organisations and communities.” World Economic Forum, “Fourth Industrial Revolution,” WEF, nd, <https://www.weforum.org/focus/fourth-industrial-revolution>.

access for their learner populations,⁸⁸ while others, including Universitas Diponegoro in Indonesia and Vietnam National University, Hanoi attempted to provide data packages and wi-fi devices to learners in need of assistance.⁸⁹ Additionally, HEIs across the region implemented flexibility measures given concerns over the quality of the learning experience for those with limited online experience. At the University of the Philippines, a new grading policy reduced the potential of receiving failing grades and offered extended time to complete course requirements in order to alleviate newfound stresses on learners.⁹⁰ Across the region, reimbursement and tuition discount plans were designed to reduce the burden on learners and families hit hardest by the economic impacts of the virus including at HCMC University in Vietnam, Universitas Diponegoro in Indonesia, and Ateneo de Manila University in the Philippines.⁹¹

Educator training and engagement is another crucial aspect of the shift to distance learning. The Ministry of Education in the Philippines hosted webinar sessions for faculty leaders to “ask the experts” and develop new online coursework, and Vietnam’s Ministry of Education and Training hosted a national remote conference to bring together decision-makers at HEIs from around the country to share best practices.⁹² However, most reported training for educators in the region came in the form either of special activities undertaken by the ICT/IT department at HEIs with an already-existing online presence and digital infrastructure (University of Science and Technology of the Southern Philippines and

⁸⁸ At Udayana University in Indonesia, and in tandem with other regional private institutions, a Memorandum of Understanding was signed with local telecommunications firm and Internet provider PT Telekomunikasi Selular, which signals a commitment by all parties to assist in the transition to distance learning and need for quality and adequate data access during the transition. University of Udayana, “Memorandum of Understanding Implementation on Data Package Services and Online Lectures between PT Telekomunikasi Selular and Campus Representatives in Bali, NTB and NTT,” University of Udayana, May 14, 2020, <https://www.unud.ac.id/en/headline3333-Memorandum-of-Understanding-Implementation-on-Data-Package-Services-and-Online-Lectures-between-PT-Telekomunikasi-Selular-and-Campus-Representatives-in-Bali-NTB-and-NTT.html>.

⁸⁹ “Keringanan UKT, Ratusan Mahasiswa Undip Dapat Pulsa Internet 10 GB,” IDN Times Jateng, <https://jateng.idntimes.com/news/jateng/fariz-fardianto/keringanan-ukt-ratusan-mahasiswa-undip-dapat-pulsa-Internet-10-gb>; “How are VNU-IS students “equipped” during the Covid-19 pandemic?,” Vietnam National University, Hanoi, January 9, 2020, <http://www.vnu.edu.vn/ttsk/?C2422/N25661/How-are-VNU-IS-students-%E2%80%99Equipped%E2%80%99D-during-the-Covid-19-pandemic?.htm>.

⁹⁰ Rappler.com, “U.P. to follow numeric grading system during outbreak,” Rappler.com, April 23, 2020, <https://rappler.com/nation/university-philippines-to-follow-numeric-grading-system-coronavirus-outbreak>.

⁹¹ It’s important to note that public HEI tuition is offered at no cost to learners in the Philippines, and the decision to discount or refund tuition fees was made individually at each private institution. “Gần 300 sinh viên được hỗ trợ học phí sau Covid – 19,” June 15, 2020, <https://www.hcmut.edu.vn/vi/newsletter/view/tin-tuc/5887-gan-300-sinh-vien-duoc-ho-tro-hoc-phi-sau-covid--19>; Diponegoro University, “Undip Approve Request for Tuition Reduction,” Diponegoro University, May 13, 2020, <https://www.undip.ac.id/language/en/post/14528/undip-approve-request-for-tuition-reduction.html>; Bonz Magsambol, “CHED: Universities, colleges will decide on tuition fee refund,” Rappler.com, April 14, 2020, <https://rappler.com/nation/ched-universities-colleges-decide-tuition-fee-refund-coronavirus>; Rappler.com, “LIST: State colleges and universities covered by free tuition law,” Rappler.com, August 4, 2017, <https://rappler.com/nation/list-state-colleges-universities-free-tuition>.

⁹² Huong Nguyen and Thanh Pham, “Is COVID-19 an opportunity to strengthen online teaching?” University World News, May 16, 2020, <https://www.universityworldnews.com/post.php?story=20200512154252178>.

University of Santo Tomas, Philippines⁹³) or via collaboration among HEIs within the country to be able to best leverage the relevant knowledge, as occurred at Don Mariano Marco Memorial State University in the Philippines.⁹⁴



Research and Innovation

Research and innovation efforts by HEIs in the region appeared to place a large emphasis on the design, production, and implementation of new medical technology and equipment. The most common medical device studied and produced was a low-cost ventilator, an endeavor undertaken at HEIs including but not limited to Lac Hong University in Vietnam, the Technological Institute of the Philippines, and the Universitas Indonesia.⁹⁵ This development work was likely driven by immediate need and economics: the severe respiratory effects of COVID-19 infection, the cost of purchasing ventilators on the market, and the ongoing challenges affecting global supply chains during a period of pandemic. It is further worth noting that creation of disinfectants and disinfection chambers were undertaken by at least one HEI in each country. In Indonesia, the Chemical Engineering Department and Disaster Response Unit at the University of Gadjah Mada manufactured a new disinfectant to be distributed among locations throughout the city required to remain open through the health crisis,⁹⁶ and at the Institut Teknologi Bandung (ITB), a physics department faculty member designed and prototyped a mobile disinfecting unit that leverages ultraviolet light as a sterilizing agent for use in local hospitals.⁹⁷ In Vietnam, both the Hanoi University of Science and Technology and the Ho Chi Minh City University of Technology developed mobile disinfecting units for placement in high trafficked and high risk areas in their respective cities.⁹⁸ In the Philippines, nursing and engineering faculty at Palawan State University collaborated in creating a safe-for-the-public disinfectant chamber to be

⁹³ <https://www.ustp.edu.ph/wp-content/uploads/2020/06/OVPAA-Memo-028-Guidelines-for-1st-Sem-AY-2020-2021.pdf>; Melvin Remulla Marcial, “Amidst the COVID19 Pandemic: The best online learning and teaching practices in Internal Medicine Clerkship program of Faculty of Medicine and Surgery, University Santo Tomas, Philippines,” University of Santo Tomas, May 2020, https://www.researchgate.net/publication/342177398_Amidst_the_COVID19_Pandemic_The_best_online_learning_and_teaching_practices_in_Internal_Medicine_Clerkship_program_of_Faculty_of_Medicine_and_Surgery_University_Santo_Tomas_Philippines.

⁹⁴ Don Mariano Marcos Memorial State University, “DOUS shares Flexible Learning practices to Tarlac Agricultural University, other HEIs,” DMMMSU, June 15, 2020, <https://www.dmmmsu.edu.ph/2020/06/15/dous-shares-flexible-learning-practices-to-tarlac-agricultural-university-other-heis/>.

⁹⁵ Lac Hong University, “Sinh viên ĐH Lạc Hồng sáng chế máy trợ thở,” YouTube, June 2020, <https://www.youtube.com/post/UgxiziguWoB6YZF7-54AaABCQ>; https://tip.edu.ph/article_4.html; Universitas Indonesia, “UI Serahkan Ventilator COVENT-20 ke RSCM,” UI, May 20, 2020, <https://www.ui.ac.id/en/ui-serahkan-ventilator-covent-20-ke-rscm/>.

⁹⁶ Natasa Adelayanti, “UGM Faculty of Engineering Produces Disinfectant and Hand Sanitizers,” Universitas Gadjah Mada, April 13, 2020, <https://ugm.ac.id/en/news/19275-ugm-faculty-of-engineering-produces-disinfectant-and-hand-sanitizers>.

⁹⁷ Adi Permana, “Able to Destroy Viruses, ITB Creates Mobile High Power Disinfectants Using Type C UV,” Institut Teknologi Bandung, May 14, 2020, <https://www.itb.ac.id/news/read/57482/home/able-to-destroy-viruses-itb-creates-mobile-high-power-disinfectants-using-type-c-uv>.

⁹⁸ Ngoc Thanh, “Covid-19 innovation: Vietnam’s mobile chambers allow disinfection in one go,” VNExpress International, March 16, 2020, <https://e.vnexpress.net/news/news/covid-19-innovation-vietnam-s-mobile-chambers-allow-disinfection-in-one-go-4069276.html>; Nhan Dan, “Mobile disinfection chamber launched in HCM City,” Nhan Dan, March 20, 2020, <https://en.nhandan.org.vn/scitech/sci-tech/item/8503502-mobile-disinfection-chamber-launched-in-hcm-city.html>.

deployed in the community.⁹⁹ The density of the cities in these countries presented a challenge in stemming the spread of such an infectious virus, and, as such, initiatives to mobilize disease response and disinfectants are of paramount importance to government disease control efforts.

Spotlight on Vietnam: Building University-Industry Learning and Development through Innovation and Technology Alliance (BUILD-IT)¹⁰⁰



Though Vietnam emerged from the COVID-19 lockdown quicker than most countries examined in this analysis, commitment to understanding and defeating the virus did not end. Through the USAID funded BUILD-IT activity, the Ho Chi Minh City University of Technology launched its third annual Bach Khoa (BK) Innovation competition with a focus on design and innovation of pedagogical and social challenges.¹⁰¹ The winning team, mentored by educators in the Higher Engineering Education Alliance Program (HEEAP),¹⁰² designed a new portable air filter to combat COVID-19.¹⁰³

At the Da Nang University of Technology, the BUILD-IT-supported Maker Innovation Space was the site of additional innovation by university learners and educators to combat the virus.¹⁰⁴ The students distributed hand sanitizer among patients and staff and, within a three-day design sprint, they were able to design, prototype, test, and improve a low-cost automatic hand sanitizer dispenser. The Da Nang City Hospital ordered ten of the dispensers to be placed throughout that property.

In many instances, the research and design of these new medical devices and PPE was completed under the leadership of faculty members from engineering and/or ICT departments at the HEIs using funding from alumni donors, from local governments, or from private partners. International funding for science and technology was not common across all three nations, though four Vietnamese institutions (Hanoi University of Science and Technology, Ho Chi Minh City University of Architecture, University of Danang, and Vietnam National University Ho Chi Minh City) did largely benefit from support from the

⁹⁹ Palawan State University, “Palawan State University Responds to Help Fight COVID-19,” PSU, nd, <http://psu-covid19.palawan.edu.ph/>.

¹⁰⁰ The BUILD-IT Alliance is an education alliance among government, industry, and academic partners in the United States and Vietnam. The goal of the project is to link science, technology, engineering, and math instruction in Vietnamese universities with the needs and capabilities of companies, so that graduates are ready to enter the workforce and contribute to Vietnam’s transforming economy. Jennifer L. Lebron, Dr. Anne Griffin, and Dr. Robin DePietro-Jurand, “USAID Higher Education: Landscape Analysis 2014-2018,” USAID, November 2019, <https://www.edu-links.org/sites/default/files/media/file/HELA%20Annex%20D.pdf>.

¹⁰¹ Bach Khoa Innovation, “Các Vòng Thi Và Sự Kiện,” Bach Khoa Innovation, nd, <https://oisphcmut.edu.vn/bk-innovation/>.

¹⁰² In collaboration with an expanding industry consortium, the Ira A. Fulton Schools of Engineering’s Higher Engineering Education Alliance Program (HEEAP) is revolutionizing and modernizing the top engineering and technical vocational universities in Vietnam. This modernization process includes developing experienced university leadership, constructing innovative and effective curriculum, and promoting university engagement. HEEAP’s founding partners in 2010 were the USAID and the Intel Corporation. Since then, HEEAP has added partnerships with Siemens Corporation, Cadence Inc., and Danaher Corporation (Fluke, Tektronix, Keithley companies). <https://heeap.org/>.

¹⁰³ BUILD-IT, “HCMUT Makes Major Moves Towards Further Innovative Programing,” USAID and Arizona State University, nd, <https://builditvietnam.org/news/hcmut-makes-major-moves>.

¹⁰⁴ The University of Da Nang in collaboration with Fablab (fabrication laboratory) Da Nang, USAID, and Arizona State University (ASU) officially launched a Maker Innovation Space in the central city. The space, located at Da Nang University, will help students gain skills to launch and test new technologies and innovative solutions for community development challenges with access to a fully equipped laboratory. Vietnam News, “Maker Innovation Space debuts in Danang,” HEEAP, nd, <https://heeap.org/news/maker-innovation-space-debuts-danang>.

Agence Universitaire de la Francophonie (AUF).¹⁰⁵ Projects receiving funding at these four schools included design and manufacturing of medical stretchers, robotic hospital delivery systems, affordable testing improvements, and foldable aerosol boxes for virus prevention.¹⁰⁶

While a majority of research and innovation focused on technical and medical inventions, each country had examples of HEIs that dedicated time and effort to studying the direct and indirect effects of pandemics on society. Research efforts spanned from the role of public confidence in combating pandemics and similar crisis events at the Gadjah Mada University, to hosted seminars on crisis management and the development of a competent government response at the Fulbright University of Vietnam, to the call for policy papers to examine societal elements of the post-pandemic world, run by the University of the Philippines system.¹⁰⁷ Agricultural and sustainability topics were explored in HEIs from more rural regions of these emerging markets, while HEIs from the largest and most dense urban centers focused heavily on public health and disease control initiatives.

¹⁰⁵ “As part of its special COVID-19 action plan, the AUF launched, from April 10 to May 5, 2020, an international call for projects to support, from within its member institutions, initiatives of engineering students and young researchers linked to the pandemic. While a fund of 500,000 euros was initially devoted to it, the great success of this call (nearly 2,000 projects from 76 countries), and the quality of the projects proposed led the AUF to double its grant, which has now reached a million euros and will finance 92 projects from 87 member institutions in 44 countries.” AUF, “Projets COVID-19,” AUF, nd, <https://www.auf.org/nos-actions/covid/?region%5B0%5D=asie-pacifique>; AUF, “Appel à projets COVID-19: Résultats de la sélection,” AUF, nd, <https://www.auf.org/wp-content/uploads/2020/05/AUF-AAP-COVID-SELECTION-logo.pdf>.

¹⁰⁶ VN Explorer, “Vietnamese university-developed COVID-19 initiatives receive sponsorship,” VN Explorer, May 31, 2020, <https://vnexplorer.net/vietnamese-university-developed-covid-19-initiatives-receive-sponsorship-a202044974.html>.

¹⁰⁷ Natasa Adelayanti, “UGM PolGov Research Reveals Public Cynicism to Government in Handling Covid-19,” Universitas Gadjah Mada, June 2, 2020, <https://ugm.ac.id/en/news/19495-ugm-polgov-research-reveals-public-cynicism-to-government-in-handling-covid-19>; Fulbright, “Crisis management: A perspective in response to Covid-19,” Fulbright, April 25, 2020, <https://fsppm.fulbright.edu.vn/en/news-events/fsppm-news/crisis-management-a-perspective-in-response-to-covid-19/>; University of the Philippines, “COVID-19 UPdates,” UP, nd, <https://www.up.edu.ph/covid-19-updates/#policy>.

Spotlight on Philippines: Science, Technology, Research and Innovation for Development (STRIDE) Program¹⁰⁸



agencies in the province.¹⁰⁹

At Don Mariano Marcos State University, STRIDE funding over the last five years was key in building capacity to innovate and to develop bioethanol production technologies. These technologies have been leveraged in the fight against COVID-19, creating a new and locally sourced alternative ethanol disinfectant. According to a report from RTI, the STRIDE implementing partner, since March 2020, the HEI has been able to manufacture and distribute more than 1,000 liters of alcohol disinfectant for more than 20 municipalities, 30 churches, hospitals, and other frontline



Community Engagement

High context cultures, such as those in the nations studied in East Asia and the Pacific, place an emphasis on communication and engagement throughout society.¹¹⁰ This collectivist approach to challenges is evident in the actions undertaken by HEIs included in this analysis and the relationships between the HE systems and the communities that they serve and within which they are located. News reports indicated positive outcomes when communication and dialogue throughout the community was a hallmark of HEI initiatives, and the HEIs with the highest level of community engagement were able to showcase success stories through their own publications as well.

In each of the three countries, initiatives launched by educators, learners, and administrations targeted the public health needs of their communities with fundraisers and material donations of PPE as well as volunteer work.¹¹¹ Facilities at select HEIs were repurposed after the closure of on-site classes with initiatives including a partnership with the local government at the University of Science and Technology of the Southern Philippines wherein large halls and gymnasium spaces were used to house returning Filipino expats and locally stranded individuals;¹¹² frontline health responder training in the gyms and

¹⁰⁸ “Launched in 2013, STRIDE works in support of the U.S.–Philippines Partnership for Growth with Equity, a White House initiative that promotes broad-based and inclusive growth. The program helps form partnerships between universities and industry to enhance the nation’s capacity for innovation-led economic growth. Working together with several government departments, STRIDE helps implement a jointly developed national innovation roadmap that defines policies and efforts required to make innovation drive economic growth. This is one of the many vital steps STRIDE is supporting toward fostering stronger convergence among key players in the Philippine innovation landscape.” RTI International, “Driving Growth in the Philippines by Linking Education and Industry,” RTI International, nd, <https://www.rti.org/impact/driving-growth-philippines-linking-education-and-industry>.

¹⁰⁹ Ibid.

¹¹⁰ High context culture is a concept explained by the anthropologist Edward Hall in his book, *The Silent Language*. High context cultures are characterized by implicit and context-driven communication styles while also tending to be more collectivist with a high value placed on relationships in life and business.

¹¹¹ Universitas Kuningan, “Uniku Salurkan Bantuan ke Posko Relawan Sampora Cilimus Kuningan,” UK, nd, <https://uniku.ac.id/uniku-salurkan-bantuan-ke-posko-relawan-sampora-cilimus-kuningan/>; Ngọc Hải, “Son Lôi sắp nhận 500 lít nước sát khuẩn từ ĐH Bách Khoa Hà Nội,” Dan Viet, February 16, 2020, <https://danviet.vn/son-loi-sap-nhan-500-lit-nuoc-sat-khuan-tu-dh-bach-khoa-ha-noi-77771059253.htm>; Cebu Institute of Technology Univeristy, “CIT DEBATE SOCIETY DONATION DRIVE UPDATES,” Facebook, April 14, 2020, <https://www.facebook.com/CITUniversity/posts/3152249438138722>.

¹¹² “USTP opens its doors to returning OFWs and LSIs,” Republic of the Philippines, <https://cdo.ustp.edu.ph/?p=1941>.

social halls at Western Mindanao University in the Philippines;¹¹³ and dormitories at HCMC University used as quarantine centers and/or overflow housing from local hospitals.¹¹⁴

Direct donations of food supplies were distributed to those most at risk and frontline worker populations as evidenced in Palawan State University as part of the Philippines' "Heal as One" campaign.¹¹⁵ HEIs with high capacity levels were able to offer auxiliary and ancillary services in support of their public health initiatives ranging from mental health counseling (De La Salle University Philippines), to free legal assistance (University of the Philippines), to food security and nutrition initiatives (Don Mariano Marcos Memorial State University in the Philippines and University of Muhammadiyah Malang Indonesia).¹¹⁶



Communications Strategy

The East Asia and Pacific sub-region was characterized by an exceptionally high usage of social media platforms to ensure learners, educators, and other HE system stakeholders received key COVID-19 updates. These platforms included but were not limited to Facebook, Twitter, and YouTube.

Updates released by national and regional governments were shared via these platforms to ensure that the most up-to-date information reached the community, though the constant influx of updates in a period of crisis created a difficult-to-navigate ecosystem wherein key insights may have been buried. The University of the Philippines serves as an exemplary actor in attempting to counter this confluence, as their official Facebook page maintained selected "pinned insights" that remained at the top of the page as a constant reminder of what they deemed to be among the most relevant posts from the previous weeks.

Official web pages at both the national and HEI level in East Asia and the Pacific were utilized with less frequency than social media platforms, but presented viable sources of key public health-related information as well platforms for highlighting positive news coverage of learner, educator, and institutional efforts to combat the virus in the community.

Of particular note at the national level is that publications and communications strategies were predominantly focused on providing public health updates and offering resources for better

¹¹³ Myra Cel L. Espinosa, "Zambo City prepares for resumption of commercial flights on June 8," Philippine Information Agency, June 3, 2020, <https://pia.gov.ph/press-releases/releases/1043594>.

¹¹⁴ "Nhiều Nhà Háo Tâm, Doanh Nghiệp Tài Trợ Cho Công Tác Chống Dịch COVID-19 Tại Đhqg-Hcm," March 24, 2020, https://vnuhcm.edu.vn/tin-tuc_32346864/nhieu-nha-hao-tam-doanh-nghiep-tai-tro-cho-cong-tac-chong-dich-covid-19-tai-dhqg-hcm/323633386864.html.

¹¹⁵ Palawan State University, "Palawan State University Responds to Help Fight COVID-19," PSU, nd, <http://psu-covid19.palawan.edu.ph/>.

¹¹⁶ Ian Biong, "DLSU offers free mental health counseling amid COVID-19 pandemic," Inquirer.net, April 4, 2020, <https://newsinfo.inquirer.net/1253820/dlsu-offers-free-mental-health-counseling-amid-covid-19-pandemic>; Jo. Florendo B. Lontoc, "UP Law offers free legal aid online," UP, May 5, 2020, <https://www.up.edu.ph/up-law-offers-free-legal-aid-online/>; Don Mariano Marcos Memorial State University, "DMMMSU OUS supports PGLU's "Plants vs. COVID-19" program," DMMMSU, May 14, 2020, <https://www.dmmmsu.edu.ph/2020/05/14/dmmmsu-ous-supports-pglus-plants-vs-covid-19-program/>; Selasa Humas, "Sukses Kembangkan Padi 400 Bulir Per Batang," UMM, June 16, 2020, <http://www.umm.ac.id/id/berita/sukses-kembangkan-padi-400-bulir-per-batang.html>.

understanding the virus, while HEIs carried a larger responsibility in educating their own stakeholders about the specific elements of the transition to distance learning and future academic engagement.

South and Central Asia

National responses to COVID-19 in Afghanistan and Pakistan prioritized the involvement of the HE system in mitigating the impact of the virus, and both countries further prioritized delivering distance learning to youth, despite national HEI closures starting in mid-March. According to World Bank data, higher education enrollment in South Asia has slowly been increasing since the early 2000s, but still trails average OECD enrollment percentages by nearly 50 percent.¹¹⁷ Twenty-one HEIs were examined in the course of this analysis, with 19 classified as public institutions.



Continuity of Learning

The Ministry of Higher Education in Afghanistan and the Higher Education Commission (HEC) in Pakistan published guidelines on the shift to distance learning and the need to safeguard student learning outcomes. In Pakistan, the HEC published a comprehensive learner-centered plan to address concerns with quality, connectivity, and anxiety stemming from the crisis.¹¹⁸ Individual HEIs chose platforms for distance learning ranging from Zoom at Herat University¹¹⁹ in Afghanistan, to Microsoft Teams and Skype at Mehran University of Engineering and Technology, Jamshoro in Pakistan, to What'sApp and Google Classroom at Nangarhar University in Afghanistan¹²⁰ and Fatima Jinnah Women University, Rawalpindi¹²¹ in Pakistan.¹²²

The National University of Science and Technology, Islamabad (NUST) designed an “e-learning café” for its learners,¹²³ and the University of Agriculture, Faisalabad created an online learning management platform that learners used in addition to Zoom and YouTube for attendance, course materials, and assessments.¹²⁴ The transition to distance learning appeared easiest for those institutions with an existing online presence. Partnerships with and usage of massive open online courses (MOOCs) and

¹¹⁷ UNESCO Institute for Statistics, “School enrollment, tertiary (% gross) - United States, OECD members, South Asia, Afghanistan, Pakistan,” World Bank, nd, https://data.worldbank.org/indicator/SE.TER.ENRR?end=2018&locations=US-OE-8S-AF-PK&name_desc=false&start=1970.

¹¹⁸ Higher Education Commission, Pakistan, “Why Online Education? (Chairman, HEC),” HEC, April 14, 2020, <https://www.hec.gov.pk/english/HECAnnouncements/Pages/Why-Online-Education.aspx>.

¹¹⁹ Examples of Herat University Zoom webinars and lessons found on their official Facebook page, <https://www.facebook.com/hu.edu.af>.

¹²⁰ Mehran University of Engineering & Technology, “MUET ME/PhD ONLINE CLASSES: Instructions to students,” MUET, April 9, 2020, <http://muet.edu.pk/news/muet-mephd-online-classes-instructions-students>.

¹²¹ Fatima Jinnah Women Univeristy, “FJWU Online Teaching System,” FJWU, nd, <https://fjwu.edu.pk/fjwu-online-teaching-system/>.

¹²² <https://nu.edu.af/en/news/single/instructors-nangarhar-university-are-teach-their-lessons-online>

¹²³ National Univeristy of Sciences & Technology, “PDC e-Learning Café,” NUST, April 2020, <http://www.nust.edu.pk/Events/Pages/PDC-e-learning-cafe.aspx>.

¹²⁴ University of Agriculture Faisalabad, “Time Allocated to Faculties and Sub Campuses,” UAF, nd, <http://lms.uaf.edu.pk/>.

American courseware providers including Coursera with Mehran University of Engineering and Technology and edX with Herat University have opened new pathways for students as well.¹²⁵



Research and Innovation

Scientific and technological advancement initiatives offered the opportunity for HEIs in each country to showcase their capacity and resilience. Each nation had a severe deficiency of working ventilators in hospitals at the start of the pandemic, and purchases on the international market could run as high as \$50,000 each. Multiple HEI efforts in both countries were, as a result, dedicated to designing and producing low-cost and locally sourced ventilators, increasing the national capacity to deal with the virus. Two recent graduates of the Biomedical Technology (BMET) program at Kabul University of Medical Sciences (KUMS) in Afghanistan developed such an option in May;¹²⁶ and learners and educators at the University College of Engineering and Technology at Islamia University Bahawalpur in Pakistan developed a prototype that was sent for government approval as early as April.¹²⁷ Further advancement at HEIs include alternatives to N95 masks and new alcohol hand sanitizer gels. The University of Health Sciences, Lahore in Pakistan has been conducting research into the effectiveness of alternative treatment plans using blood plasma therapy.¹²⁸



Community Engagement

HEIs in Afghanistan and Pakistan leveraged their digital assets to interact with their communities quite often, reinforcing their commitment to social distancing. In Afghanistan, Herat University hosted webinars with topics ranging from radiology and medical imaging to an academic forum for global research institutions to share their findings on COVID-19.¹²⁹ In Pakistan, the mental health of learners and the community was a priority at many HEIs. The University of Punjab, Lahore staffed a mental health hotline; NUST opened free counseling services; and the Lahore College for Women University entered a partnership with the International Young Psychologists Society to launch online counseling services for the general public at no charge.¹³⁰ Most HEIs also functioned as broadcasters of public health best practices from government education agencies and health/medical divisions on campus.

¹²⁵ <https://hu.edu.af/en/B2-open-edx>; Mehran University of Engineering & Technology, “Free Coursera Membership for MUET,” MUET, April 20, 2020, <http://muet.edu.pk/news/free-coursera-membership-muet>.

¹²⁶ The BMET program was formed through a partnership with the Center for International Education (CIE) at the UMass Amherst College of Education and is supported by USAID workforce development funding.

¹²⁷ Abdul Rehman Sajjad, “Covid-19: Islamia University Bahawalpur’s online classes in progress,” Radio Pakistan, April 26, 2020, <https://www.radio.gov.pk/26-04-2020/covid-19-islamia-university-bahawalpurs-online-classes-in-progress>.

¹²⁸ University of Health Sciences Lahore, “Do Your Part in War Against Coronavirus,” UHS, nd, <http://uhs.edu.pk/downloads/plazma.pdf>.

¹²⁹ Examples found on the official Facebook page, <https://www.facebook.com/hu.edu.af>.

¹³⁰ University of the Punjab, Lahore, “COVID-19 Mental Health Help Line,” UPL, nd, <http://pu.edu.pk/MHH-COVID-19/>; National University of Sciences & Technology, “Staying Safe in the Time of Coronavirus,” NUST, nd, <http://www.nust.edu.pk/News/Pages/Latest-Information-on-Prevention-Against-Coronavirus-at-NUST.aspx>; Academia, “LCWU Establishes Online Counseling Center For Psychological Support,” *Academia*, March 20, 2020, <https://academiamag.com/lcwu-establishes-online-counseling-center-for-psychological-support/>.

Spotlight on Pakistan: Community-Oriented Research and Innovation



Pakistan's HEIs demonstrated rapid, community-oriented research and innovation initiatives that utilized online communication methods to overcome the physical hurdles presented by the COVID-19 pandemic. Research-oriented HEIs in particular drew upon their strong foundation of academic and community-based ties to develop medical, social, and technological solutions to the challenges brought about by COVID-19. For example, the Islamiah University participated in an international webinar to brainstorm how to safely reopen schools, while Fatima Jinnah Women's College collaborated with the Institute of Public Health at the University of Manitoba to create a research institute meant to advance women's health within the larger context of global public health and education.¹³¹ NUST implemented nationwide surveys and created a diagnostic testing kit approved by the Pakistani government.¹³² The University of Health Sciences in Lahore is conducting clinical research to assess the potential of blood plasma therapy as a COVID-19 treatment, and is one of only three hospitals in the country with permission to test potential treatments.¹³³ With respect to behavioral research and its implications on public policy, results from a study by the University of the Punjab suggest that increased following social media accounts indicates that health awareness campaigns are important for enhancing the public's general knowledge about COVID-19.¹³⁴

USAID's programming through the U.S.-Pakistan Centers for Advanced Studies (USPCAS) has directly supported these innovative initiatives. USPCAS is a \$127-million higher education project to bridge the gaps between Pakistan's academic, government, and private sectors in areas critical to the country's advancement. In addition to overseas collaboration opportunities, USPCAS grants a significant number of scholarships every year, with 50 percent going to women.¹³⁵ Through focusing investments on both institutional and individual learner capacity, USAID programming in this area assisted Pakistan to adapt its country-wide capacity to finding collaborative solutions amidst the COVID-19 crisis.



Communications Strategy

As noted with respect to continuity of learning agendas above, the Ministry of Higher Education and Ministry of Education in Afghanistan and the Higher Education Commission in Pakistan published content on their official websites,¹³⁶ as well as through social media. It is worth highlighting the comprehensive nature of the resources made available electronically by the

¹³¹ Public Relations Office, "IUB And CGSS Signed MOU To Initiate Joint Research Projects," The Islamia University of Bahawalpur Pakistan, June 11, 2020, <https://www.iub.edu.pk/iub-and-cgss-signed-mou-to-initiate-joint-research-projects>.

¹³² National University of Sciences & Technology, "NUST Made Diagnostic Kits for COVID-19 Get Nod From DRAP Over Successful Lab Trials," NUST, June 12, 2020, <http://www.nust.edu.pk/News/Pages/NUST-made-diagnostic-kits-for-COVID-19-get-nod-from-DRAP-over-successful-lab-trials.aspx>.

¹³³ Dawn, "Three Sindh hospitals start trials of new Covid-19 treatment," *Dawn: Today's Paper*, May 8, 2020, <https://www.dawn.com/news/1555388>.

¹³⁴ University of Punjab, "Health awareness campaign vital for COVID 19 awareness", June 14, 2020, http://pu.edu.pk/home/section/exam/10698?fbclid=IwAR0ei8Yoj4yXmG5p_L8ZITCmfb9ODqYjn2HiveHdCouplktjWnKr-alf2Lw.

¹³⁵ USAID, "Centers For Advanced Studies Program," USAID, May 7, 2020, <https://www.usaid.gov/news-information/fact-sheets/centers-advanced-studies-program>.

¹³⁶ Ministry of Higher Education, <https://mohe.gov.af/>; Higher Education Commission, Pakistan, <https://www.hec.gov.pk/english/pages/home.aspx>.

HEC in Pakistan to provide an easily navigable system to find relevant information for institutions, learners, and educators.¹³⁷

Similar to the countries profiled in the East Asia and Pacific sub-region, social media was the primary mode of communication to HE and community stakeholders. Facebook pages of individual HEIs were frequently updated, though from a research perspective, these presented a challenge to translate and to find previously posted relevant information. YouTube was an actively used platform in each country as well. In Pakistan, the University of Agriculture, Faisalabad produced and published its own video content to spread awareness of best practices for COVID-19 prevention, and the University of Punjab, Lahore launched a new YouTube channel in March through which it published highlights of the HEI's research and education efforts as well as public health updates.¹³⁸ In Afghanistan, Kabul Polytechnic University used YouTube as a platform for hosting live video webinars open to learners, educators, and local community members about ongoing university scientific research and public health initiatives.¹³⁹

Europe and Eurasia (E&E)

Across four countries analyzed within the E&E region—Georgia, Kosovo, Moldova, and Bosnia—I4 HEIs were observed, including two private and 12 public institutions. The HEIs supported educators and learners by transitioning some campus resources online that had previously only been available on campus, such as the library database and counseling sessions. Additionally, HEIs in the region offered online seminars and workshops, allowing learners and educators to stay engaged and continue to develop skills in distance learning environments. By incorporating technological advancements to reach a broader audience with updates on COVID-19, HEIs in the region were also able to highlight their critical role as a community resource in a time of global health crisis.

Despite relatively high HE enrollment, the region has high youth unemployment rates as there is a gap between instruction and the practical knowledge and skills relevant to the needs of employers in the broader economy.¹⁴⁰ While the shift to an online learning environment has posed challenges, the response of HE systems in the region suggests opportunities for continued learning and an example of how HEIs can function as a central part of the solution in global crises.

¹³⁷ Higher Education Commission, Pakistan, "HEC COVID-19 Guidance," HEC, nd, <https://www.hec.gov.pk/english/Pages/Covid-19-Guidance.aspx>.

¹³⁸ Punjab University Television, <http://putv.online/>; Punjab University Web TV, "Contributions & Achievements: PUTV.Online," YouTube, May 28, 2020, https://www.youtube.com/watch?v=lwfkRPU8c&feature=youtu.be&fbclid=IwAR3VRW0I-49kanHJTfM8D4XzQVzLjc8FI9TTuLemSDgDfTFCX_ngusRnbBQ.

¹³⁹ An example of a public webinar during COVID-19 is copied here. The topic showcased is on GIS usage and application in geological studies. Hemayatullah Ahmadi, "Application of RS&GIS in Geological Studies," YouTube, March 25, 2020, https://www.youtube.com/watch?v=3_AXhrFEG4&feature=youtu.be&fbclid=IwAR28i0PJutaISfxGrbo0RQ9BfvBM TpZxz9F3vwwu9QUi4RENeuk-ZYGTuS8U.

¹⁴⁰ Jennifer L. Lebrón, Dr. Anne Griffin, and Dr. Robin DePietro-Jurand, "USAID Higher Education: Landscape Analysis 2014-2018," USAID, November 2019, <https://www.edu-links.org/resources/usaaid-higher-education-landscape-analysis-2014-2018>.

USAID Higher Education Programming in Europe and Eurasia

The Agency's higher education activities in Europe and Eurasia focuses on workforce readiness, civil society strengthening, and wider education system strengthening.¹⁴¹ Building the capacity of higher education institutions supports the pursuit of broader development goals by expanding the capacity of local actors and equipping individuals with the skills and knowledge necessary to positively contribute to society. Some activities have taken a more direct approach to HEI capacity strengthening such as the Transformational Leadership Program - Scholarships and Partnerships (TLP), which recently completed its work in Kosovo.¹⁴² TLP built faculty and institutional partnerships between U.S. institutions and the University of Pristina to improve teaching methodologies, strengthen institutional support for research, and improve career orientation services for graduates and alumni.

Other activities have focused on positioning higher education institutions as engaged actors within a system. The USAID Agriculture Program in Georgia is designed to accelerate the growth of agricultural sub-sectors that show strong potential to create jobs and increase incomes. To achieve this, Georgian universities, vocational education institutions, business service providers, and enterprises are coming together to update training curricula in order to match the needs of agribusinesses and to increase access to private sector-led skills development opportunities in agriculture.



Continuity of Learning

In the E&E region, HEIs and government education agencies worked both independently and collaboratively to deliver tools and resources for students to remain engaged in their education despite the transition to a virtual environment. Since the announcement of distance learning from national education agencies including Kosovo's Ministry of Education; Georgia's Ministry of Education, Science, Culture, and Sport; Moldova's Ministry of Education, Culture, and Research; and Bosnia and Herzegovina's Ministry of Scientific and Technological Development, HEIs continued to inform educators and learners of efforts in keeping their campuses safe (through social distancing and regular cleaning) for limited in-person use as permitted.

With the shift to distance learning, campus resources including career services, guidance counseling, and library services transitioned online. The Academy of Music, Theatre, and Plastic Arts in Moldova enhanced their electronic library and granted students online access to literature and articles. In addition to offering library resources, many HEIs provided accessible psychological counseling services to help students manage their mental well-being. At the Technical University of Moldova, psychologists from the Department of Social and Human Sciences launched an initiative to counsel students and faculty to help them manage anxiety and/or negative emotions.¹⁴³ The counseling sessions were conducted privately through Facebook, Instagram, and Viber.¹⁴⁴ Additionally, Ilia State University in Georgia held seminars on mental health and the impact of stress from COVID-19 on students. Emphasizing mental health awareness, social isolation, and creating a community for people to share resources, Georgia's New

¹⁴¹ Ibid.

¹⁴² USAID, "Transformational Leadership Program – Scholarships and Partnerships," USAID, nd, <https://www.usaid.gov/kosovo/fact-sheets/transformational-leadership-program-scholarships-and-partnerships>.

¹⁴³ Technical University of Moldova, "Psychological Counseling During the Pandemic," TUM, March 30, 2020, <https://utm.md/en/blog/2020/03/30/psychological-counseling-during-the-pandemic/>.

¹⁴⁴ Viber is a cross-platform voice-over IP and instant messaging software application.

Vision University also launched social media campaigns allowing individuals affected by COVID-19 to share their stories and, for those interested and able to support, to donate blood and supplies.¹⁴⁵

Various platforms such as Google Meet, Zoom, and Skype were adopted by HEIs to make courses available online. Multiple webinars and workshops were hosted to provide general guidance and answer questions prior to implementation to make the transition as smooth as possible for students and faculty. The State Pedagogical University in Moldova offered intensive online courses for professors to develop skills using digital platforms and software applications including Moodle, Zoom, Telegram, Jamboard, and Padlet.¹⁴⁶

The virtual learning environment also opened opportunities for virtual exchange programs, through which students could enroll in classes at global partner institutions. The University of Sarajevo and the University of Banja Luka in Bosnia and Herzegovina were among the HEIs best able to showcase their resiliency to the changed circumstances of the pandemic. They joined campuses around the world in participating in the University of Texas's Global Virtual Exchange Initiative intended to allow students and faculty to co-create collaborative online international learning courses with peers at universities around the world.¹⁴⁷



Research and Innovation

HEIs within the region shared a commitment to investing their resources in conducting research on COVID-19 and innovating tools and technologies to help their local communities. In Kosovo, the University of Pristina collaborated with the University of Transylvania in Romania and the Polytechnic University of Valencia in Spain to launch an initiative to produce a prototype of protective masks for health professionals using 3D printers.¹⁴⁸ New Vision University in Georgia announced a grant competition for up to 175,000 Georgian Lari (approximately \$56,000 USD) to foster community-driven research within the university in response to the challenges caused by the pandemic. Research targets included understanding characteristics of virus transmission, development of the disease within certain groups, clinical management, and the effectiveness of treatment methods. Ultimately, the HEI aimed to strengthen institutional capacity to consolidate accurate, research-based information.¹⁴⁹

Recognizing the lack of protective equipment in healthcare facilities across the region, HEIs invested resources in developing protective and treatment equipment in their labs. The University of Sarajevo produced and delivered protective visors, masks, and ventilators to local hospitals. In addition to

¹⁴⁵ New Vision University, "Join Us in Combating COVID-19 Pandemic," NVU, nd, <http://www.stopcov.newvision.ge/>.

¹⁴⁶ State Pedagogical University, "Online training: Training of Trainers for Media Education," SPU, May 18, 2020, <https://www.upsc.md/training-online-formarea-formatorilor-pentru-educatia-media/>.

¹⁴⁷ Texas Global, "Global Virtual Exchange Initiative," University of Texas at Austin, nd, <https://global.utexas.edu/special-initiatives/virtual-exchange>.

¹⁴⁸ Bojan Stojkovski, "Balkan Tech Enthusiasts Deploy 3D Printers against COVID-19," BIRN, April 1, 2020, <https://balkaninsight.com/2020/04/01/balkan-tech-enthusiasts-deploy-3d-printers-against-covid-19/>.

¹⁴⁹ New Vision University, "Research Project Grant Competition to address the SARS-CoV-2/COVID-19 Pandemic," NVU, April 25, 2020, <https://newvision.ge/en/news/research-project-grant-competition-address-sars-cov-2covid-19-pandemic>.

supplying the equipment, the HEI's students and faculty volunteered in clinics and quarantine zones to offer additional help.¹⁵⁰ The University of Banja Luka's faculty of Natural Sciences and Mathematics produced safety visors for health care workers.¹⁵¹

Faculty at the University of Mostar conducted research on students' experiences with distance learning through surveys available on the official campus websites and social media sites. Questions inquired about learners' financial difficulties and well-being, as well as academic barriers posed by COVID-19.¹⁵² The research sought to better understand how learners responded to the pandemic and hoped to provide insights and recommendations for HEI planning in the future.



Community Engagement

Higher education systems in E&E showed an effort to offer community public health support. Tbilisi State Medical University in Georgia offered free remote consultation services to the public in order to assist the community in resolving any questions about COVID-19. Also, students took an active part in treatment and preventing the spread of coronavirus by volunteering to work at the university clinic.¹⁵³

In addition to community engagement activities related to supporting public health, the Agricultural University of Georgia provided free online lectures and workshops to assist local residents with public health information, financial resources, and career development counseling.¹⁵⁴ In acknowledging language barriers that may weaken the public's understanding of crisis information, the educators and learners of New Vision University worked together to reproduce information in multiple languages and in video format to increase accessibility.



Communications Strategy

In addition to many of the communication activities undertaken by HEIs in the region (and described in the Community Engagement section above), HEI social media pages played a critical role in effective communication. Social media sites such as Facebook (Ilia State University, Tbilisi State Medical University, New Vision University, University of Pristina, Academy of Music, Theatre, and Plastic Arts, and University of Tuzla), Instagram (University of Sarajevo and University of Mostar), and Twitter (University of Mostar) were often utilized by HEIs to publish

¹⁵⁰ Zurab Vadachkoria, "Rector of Tbilisi State Medical University, Professor Zurab Vadachkoria Appeals to Students and Residents," Tbilisi State Medical University, May 4, 2020, https://tsmu.edu/ts/news/Rector_of_Tbilisi_State_Medical_University_Profesor_Zurab_Vadachkoria_Apeals_to_Students_and_Residents_/5610.

¹⁵¹ University of Banja Luka, "Faculty of Natural Sciences and Mathematics Produces Safety Visors for Health Care Workers," UBL, April 1, 2020, <https://www.unibl.org/en/news/2020/04/faculty-of-natural-sciences-and-mathematics-produces-safety-visors-for-health-care-workers>.

¹⁵² Twitter, April 17, 2020, https://twitter.com/SVE_Mostar/status/1251048175697367041?s=20.

¹⁵³ Tbilisi State Medical University, "Contribution of Tbilisi State Medical University to Support COVID-19 Prevention and Treatment Measures in Georgia," TSMU, March 30, 2020, https://tsmu.edu/ts/news/Contribution_of_Tbilisi_State_Medical_University_to_Suport_COVID_19_Prevention_and_Treatment_Measures_in_Georgia/5607.

¹⁵⁴ University of Georgia Extension, "UGA Extension COVID-19 Resources," UGA Extension, nd, <https://extension.uga.edu/topic-areas/timely-topics/emergencies.html>.

statistics, government statements, and news, as well as information on continuity of learning efforts. Government education agencies engaged with the public using social media sites, notably Facebook. Their official websites also presented an expansion of the information shared on social media, diversifying the way HEIs presented and shared their findings.

The resources shared on social media sites allowed users to monitor the spread of COVID-19 at both regional and global levels to stay informed, and to have an opportunity to interact with other professionals. In contrast to official HEI websites, social media sites were updated frequently with institutional responses, programs, and schedules for workshops and webinars. Social media sites were used to provide broader COVID-19 updates, and HEI official websites were mainly used for sharing specific information regarding decisions on continuity of learning initiatives. The increase in social media usage enabled HEIs to launch various social media campaigns, offer resources, guide people on best practices in public health assistance, and form a community of support.¹⁵⁵

Latin America and the Caribbean (LAC)

Higher education enrollment in LAC has been consistently increasing over the years, but remains more than 20 percent below the average enrollment rate in OECD countries.¹⁵⁶ Where regional HE enrollment is strong, quality and relevance of degree programs are often misaligned with the demands of the labor market. The HE systems within LAC were charged with the immense task of ensuring continued access to quality higher education during this disruptive period to learning and professional development.

In LAC, data was collected in the Dominican Republic, El Salvador, Guatemala, and Paraguay. While the analysis did not include non-Spanish speaking countries, the selected countries represent three sub-regions¹⁵⁷—Central America, South America, and the Caribbean—and include the relevant national education agencies and a total of 28 HEIs. Of the 28 HEIs, 19 were private institutions and 9 were public.¹⁵⁸

The higher education systems in the four LAC countries possess distinct governance structures, which in turn affect the way individual governments interact with their country's higher education system. Common to all three is a ministerial body providing country-wide regulation of higher education institutions both public and private as well as maintaining academic standards and accreditation.¹⁵⁹

¹⁵⁵ New Vision University, "Join Us in Combating COVID-19 Pandemic," NVU, nd, <http://www.stopcov.newvision.ge/>.

¹⁵⁶ According to World Bank estimates, in 2018, HE enrollment in LAC was 51.8 percent versus 74.2 percent in OECD countries. UNESCO Institute for Statistics, "School enrollment, tertiary (% gross) - Latin America & Caribbean, United States, OECD members," World Bank, nd, https://data.worldbank.org/indicator/SE.TER.ENRR?locations=ZJ-US-OE&name_desc=false.

¹⁵⁷ As defined by the UN Food and Agricultural Organization, <http://www.fao.org/3/W7499E/w7499e25.htm>.

¹⁵⁸ For the full list of HEIs, see Annex A.

¹⁵⁹ Luis Alfredo Tobar Píril, "La educación superior en Guatemala en la primera década del siglo XXI," *Revista Innovación Educativa*, ISSN: 1665-2673 vol. 11 núm. 57, October-December 2011, <https://www.redalyc.org/pdf/1794/179422350009.pdf>; <https://www.transparencia.gob.sv/institutions/mined/documents/170818/download>; Universidad Nacional de

These government agencies vary in structure, with some having primary jurisdiction over higher education, while others maintain a more general scope of governance over the entire education system. Generally, government education agencies dedicated to the HE system communicated the most relevant information in the region for this analysis.

USAID Higher Education Programming Latin America and the Caribbean

USAID's HE programming in LAC focuses on workforce development to drive growth; improving access, quality, and relevance of degree programs; and facilitating the transition from higher education to the workforce. The Agency's regional programming also views higher education as a means to strengthen rule of law in the region, educating individuals who pursue careers in the justice system, advancing protections of human rights, and strengthening institutional accountability.¹⁶⁰

In El Salvador, the Higher Education for Economic Growth Project built partnerships between HEIs and industry sectors to develop demand-driven, competency-based educational programs and research.¹⁶¹ In Paraguay, the Rule of Law and Culture of Integrity Program is establishing partnerships among Instituto Desarrollo (Paraguay), Harvard University, and the University of Notre Dame to improve rule of law by strengthening law programs at Paraguayan HEIs.¹⁶² In the Dominican Republic, Guatemala, Honduras, and Jamaica, the Advance Program seeks to improve youth employability by strengthening the capacity of two- and three-year technical HE programs to meet the needs of disadvantaged youth.¹⁶³ In the Dominican Republic, La Universidad ISA, Ohio State University, and the City University of New York collaborate to strengthen the performance of several local HEIs to improve their ability to support educationally vulnerable youth.



Continuity of Learning

As HEIs in LAC closed their physical campuses in mid-March 2020,¹⁶⁴ national education agencies and HEIs responded rapidly to provide distance learning. Likely due to the heterogeneity of specializations and HEI types that pose challenges to resource development at such a

Asuncion, "Educacion Superior en Paraguay," UNA, April 11, 2012, <http://www2.una.py/index.php/unidades-academicas/evaluacion-y-acreditacion/519-educacion-superior-en-paraguay>; CONES, "Institucional," CONES, nd, <http://www.cones.gov.py/institucional-consejo-nacional-de-educacion-superior-cones/>; República Dominicana, "¿Quiénes somos?," <https://mescyt.gob.do/nosotros/quienes-somos/>.

¹⁶⁰ Jennifer L. Lebrón, Dr. Anne Griffin, and Dr. Robin DePietro-Jurand, "USAID Higher Education: Landscape Analysis 2014-2018," USAID, November 2019, <https://www.edu-links.org/resources/usaaid-higher-education-landscape-analysis-2014-2018>.

¹⁶¹ USAID/El Salvador, "Fact Sheet: USAID Higher Education for Economic Growth," USAID, nd, <https://2012-2017.usaid.gov/sites/default/files/documents/1862/Fact%20Sheet-%20USAID%20Higher%20Education%20for%20Economic%20Growth.pdf>.

¹⁶² Desarrollo, "Buscan fortalecer el Estado de Derecho desde la Educación Superior," Desarrollo, nd, <https://desarrollo.edu.py/iniciativa-fortalecera-el-estado-de-derecho-y-la-cultura-de-la-integridad-desde-la-educacion-superior/>.

¹⁶³ FHI360, "Advance," FHI360, nd, <https://www.fhi360.org/projects/advance>.

¹⁶⁴ According to the John Hopkins University Coronavirus Research Center, confirmed new cases of COVID-19 began to increase in LAC in early March 2020 and continued to increase through the end of the data analysis period (early July 2020). Most observed HEIs in all four countries closed their campuses by mid-March, shortly after the first confirmed case in the country. In El Salvador, a few HEIs remained open through April 2020 before closing. Notably, Central America (with the exception of Mexico) was less affected by the virus and experienced a later onset in comparison to the rest of the region. The delayed spread may have informed the decision of these HEIs to remain open.

high level, national education agencies broadly focused on information sharing to assist HEIs in the development of their own plans. All national education agencies published health guidelines for education institutions with enough generalities to allow for local context to inform decisions. To fill this coordination gap, HEIs established their own plans and made more topically relevant resources available online e.g. texts available on online libraries, virtual classes, learning platforms. Additionally, adjustments of academic activities suggested an understanding by HEIs of the consequences of the disruption to learning. These adjustments included, but are not limited to, those to the academic calendar and the exam schedule, as well as reduced evaluation criteria for final projects.

To facilitate the translation of guidelines into actionable plans, the Ministry of Education in El Salvador openly published plans submitted by HEIs to modify their operations, which may have created efficiencies for other institutions.¹⁶⁵ Similarly, the Ministry of Higher Education, Science, and Technology in the Dominican Republic reported information gathered from various HEIs on the types of digital accommodations being made, including the integration of ICTs such as Moodle, Google Classroom, Edmodo, Zoom, and Microsoft Teams.¹⁶⁶ The most salient coordinating action observed in the region, for program quality assurance, was by the National Council of Higher Education (CONES) in Paraguay, which passed a resolution requiring HEIs to submit plans to have programs officially registered as in-person degree programs utilizing digital tools.¹⁶⁷

Across the region, government education agencies recognized the obstacles posed by unequal Internet access. In Paraguay, government education agencies, elected officials, HE associations, and Internet service providers met to discuss options for expanding access.¹⁶⁸ In the Dominican Republic, the government successfully secured fixed prices for Internet and data plans for students to facilitate distance learning.¹⁶⁹

To facilitate learning during this period of academic and personal challenges, many HEIs supported students and educators in a holistic manner: academically, financially, and psychosocially. Some countries

¹⁶⁵ Ministry of Education, El Salvador, “Medidas tomadas por las Instituciones de Educación Superior,” MOE, nd, <http://www.mined.gob.sv/emergenciacovid19/ies/>.

¹⁶⁶ República Dominicana, “Mescyt Destaca Labores Durante Periodo Cuarentena y Resalta Cumplimiento de Protocolo Personal Instituciones de Educación Superior,” May 29, 2020, <https://mescyt.gob.do/mescyt-destaca-labores-durante-periodo-cuarentena-y-resalta-cumplimiento-de-protocolo-personal-instituciones-de-educacion-superior-ies/>.

¹⁶⁷ CONES passed Resolución CE-CONES N° 04/2020 on March 21, 2020, which allowed for the application of digital tools to promote the continuity of learning for in-person degree programs. CONES, “Resolución CE-CONES N° 04/2020 Consejo Ejecutivo “Que Establece La Facultad De Las Instituciones De Educación Superior Para Aplicar Herramientas Digitales De Enseñanza-Aprendizaje En El Marco De La Emergencia Sanitaria -Covid-19- Dispuesta Por Las Autoridades Nacionales,” CONES, March 21, 2020, <http://www.cones.gov.py/resolucion-ce-cones-n-042020-consejo-ejecutivo-que-establece-la-facultad-de-las-instituciones-de-educacion-superior-para-aplicar-herramientas-digitales-de-ensenanza-aprendizaje-en-el/>.

¹⁶⁸ During the period of data collection, it appeared that no agreement had been reached to expand Internet access. CONES, “El CONES acompañó un espacio de conversatorio sobre “Gratuidad del Acceso a Internet para estudiantes” convocado por la Comisión de Educación y Cultura de la Cámara de Senadores,” CONES, June 19, 2020, <http://www.cones.gov.py/el-cones-acompano-un-espacio-de-conversatorio-sobre-gratuidad-del-acceso-a-Internet-para-estudiantes-convocado-por-la-comision-de-educacion-y-cultura-de-la-camara-de-senadores/>.

¹⁶⁹ República Dominicana, “Claro facilita conectividad a estudiantes y docentes en beneficio de educación superior a distancia en el país,” <https://mescyt.gob.do/claro-facilita-conectividad-a-estudiantes-y-docentes-en-beneficio-de-educacion-superior-a-distancia-en-el-pais/>.

exemplified strong support for educators through the provision of training to facilitate the shift to distance learning. A few examples of training topics provided by the National University of the East (Universidad Nacional del Este, UNE) in Paraguay included distance pedagogy, virtual classroom management, exam administration, virtual tools, and adjustments to academic evaluations.¹⁷⁰ UNE also demonstrated proactivity in advocating for the university community's needs, requesting that the government establish partnerships to secure favorable Internet rates and subsidize those costs for students and faculty.¹⁷¹ In addition to the provision of educational support, some institutions provided economic relief and mental health support. In Guatemala, the Panamerican University (Universidad Panamericana) announced tuition reductions to support learners financially in the current crisis.¹⁷² In Paraguay, student union members at UNE successfully advocated for economic hardship scholarships to be provided by the institution.¹⁷³ Several HEIs in the region such as the National Institute for Higher Education (Instituto Nacional de Educación Superior) in Paraguay¹⁷⁴ and the Autonomous University of Santo Domingo (Universidad Autónoma de Santo Domingo) in the Dominican Republic¹⁷⁵ offered psychosocial support for learners, educators, and other staff. At both institutions, the services were provided by university departments. These actions demonstrated an awareness of the multi-faceted impacts of the pandemic on learning outcomes, resourcefulness to attempt to mitigate those impacts, and ultimately, a commitment to fulfilling the mission of higher education.

¹⁷⁰ Universidad Nacional del Este, "Facisa UNE Inicia Segundo Ciclo De Capacitación Virtual De Docentes," UNE, May 20, 2020, <http://www.une.edu.py/web/index.php/facultad-de-ciencias-de-la-salud/1601-facisa-une-inicia-segundo-ciclo-de-capacitacion-virtual-de-docentes>.

¹⁷¹ Universidad Nacional del Este, "Rector Solicita Exoneración De Costo De Internet Para Garantizar Actividades Académicas Virtuales En La UNE," UNE, April 16, 2020, <http://www.une.edu.py/web/index.php/rectorado/1574-rector-solicita-exoneracion-de-costo-de-Internet-para-garantizar-actividades-academicas-virtuales-en-la-une>.

¹⁷² A 10 percent discount on tuition payments for the month of April and a 25 percent discount for second-year tuition, for students in their first year. Universidad Panamericana, "COVID-19 Coronavirus Informa," UPA, nd, <https://www.upana.edu.gt/2020/04/02/universidad-panamericana-informa/>.

¹⁷³ Universidad Nacional del Este, "La UNE Otorgará Ayudas Económicas A Pedido De La Federación De Centros De Estudiantes," UNE, June 17, 2020, <http://www.une.edu.py/web/index.php/facultad-de-ciencias-economicas/1620-la-une-otorgara-ayudas-economicas-a-pedido-de-la-federacion-de-centros-de-estudiantes>.

¹⁷⁴ Universidad Nacional del Este, "Ciencias Económicas Y Filosofía Ofrecen Consultas Psicológicas Gratuitas Para Afrontar El COVID-19," UNE, May 28, 2020, <http://www.une.edu.py/web/index.php/facultad-de-filosofia/1610-ciencias-economicas-y-filosofia-ofrecen-consultas-psicologicas-gratuitas-para-afrontar-el-covid-19>.

¹⁷⁵ El Universitario, "UASD ha atendido 76 casos en primeros días de habilitación Línea de Ayuda Psicológica UASD COVI-19," La Universidad Autónoma de Santo Domingo, March 27, 2020, <https://www.uasd.edu.do/periodico/index.php/el-universitario/item/3616-uasd-ha-atendido-76-casos-en-primeros-dias-de-habilitacion-linea-de-ayuda-psicologica-uasd-covi-19>.

Spotlight: Facilitating Transitions for Technical Higher Education



Supported by USAID, the Advance Program works in the Dominican Republic, Guatemala, Honduras, and Jamaica to improve youth employability by strengthening the capacity of two- and three-year technical higher education programs to meet the needs of disadvantaged youth.¹⁷⁶ By fostering collaborations between the education sector and the private sector, this initiative transforms technical training programs to meet country-specific workforce needs. The five key areas of institutional capacity building are: 1) curriculum and pedagogy, 2) professional development, 3) labor-bridging services, 4) admissions and recruitment, and 5) scholarships.

In the face of HEI closures due to COVID-19, the advance team in all three countries responded rapidly to facilitate the transition to distance education.¹⁷⁷ They assisted staff and faculty in adapting career services to virtual platforms such as Facebook, Zoom, and Jamboard for conducting mock interviews or simulating workplace problem scenarios. Students received virtual job search support and opportunities to connect with industry professionals. Additionally to support the continuity of learning, students were provided data packages to ensure access to broadband. By reconfiguring training and providing resources and opportunities to connect virtually, the Advance program has demonstrated resilience and flexibility in order to accomplish its goal of improving youth employability.



Research and Innovation

Within HEIs in LAC, research teams responded rapidly to build, understand, and investigate mitigations of the direct impacts of COVID-19 on public health and the indirect impacts of the pandemic on other sectors. Within a few HEIs, research teams formed to analyze the impacts of COVID-19 on health and the economy. An example of a joint initiative, researchers from the Iberoamerican University (Universidad Iberoamericana) in the Dominican Republic partnered with the International Center for Genetic Engineering and Biotechnology of Italy to analyze the genetic sequencing of the COVID-19 virus. With USAID support, an interdisciplinary working group comprised of the economics, marketing, business, and civil engineering departments at the Universidad del Valle de Guatemala (UVG) is studying and making recommendations on how to reactivate and stimulate the economy.¹⁷⁸

In many instances, research capacity and efforts produced rapid innovations that contributed to immediate mitigation efforts. In every country, at least one HEI produced low-cost ventilators (Universidad Autónoma de Santo Domingo and Instituto Tecnológico de Santo Domingo, INTEC, Dominican Republic; Universidad de Francisco Gavidia, El Salvador; Universidad de San Carlos de Guatemala and UVG, Guatemala; and Universidad Nacional de Asunción, Paraguay). Many HEIs were also producing PPE such as masks and visors, medical devices, and hand sanitizer that was donated to local hospitals (INTEC - Dominican Republic; Universidad de San Carlos de Guatemala (USAC); Universidad Tecnológica - El Salvador; and UNA -Paraguay).

¹⁷⁶ FHI360, “Advance,” FHI360, nd, <https://www.fhi360.org/projects/advance>.

¹⁷⁷ FHI360, “Resuming education in the face of COVID-19: The Advance program in Guatemala, Honduras and Jamaica,” FHI360, August 7, 2020, <https://www.fhi360.org/news/resuming-education-face-covid-19-advance-program-guatemala-honduras-and-jamaica>.

¹⁷⁸ Universidad del Valle de Guatemala, “Proyectos Institucionales De Apoyo Durante La Pandemia Por COVID-19,” UVG, nd, <https://www.uvg.edu.gt/proyectos-covid19/>.

At USAC, the Regional Reference Laboratory for Animal Health of the Department of Veterinary Medicine and Zootechnics (Laboratorio de Referencia Regional de Sanidad Animal de la Facultad de Medicina Veterinaria y Zootecnia) was retasked to support COVID-19 testing in collaboration with the National Laboratory of Health. Bolstering the testing capacity of the Ministry of Public Health and Social Assistance (Ministerio de Salud Pública y Asistencia Técnica, MSPAS), USAC leveraged its own laboratory and human resources and utilized reagents, samples, and supplies delivered by MSPAS for testing. USAC's COVID-19 testing center developed the capacity to carry out 100 tests in five hours, results of which were reported to the MSPAS.¹⁷⁹

Spotlight: Past Investment, Current Returns



Established in 1947 and having served over 300 institutions within 80 countries, USAID's American Schools and Hospitals Abroad (ASHA) Program seeks to promote health and education and the creation of vibrant networks of civil society institutions worldwide. USAID/ASHA funds the construction of academic buildings and medical facilities as well as the procurement of medical and educational equipment. USAID/ASHA has built a dynamic legacy of top quality civil society institutions and overseas partnerships around the world. These partnerships leverage existing knowledge and resources to ensure greater program scale, financial sustainability, and local ownership.¹⁸⁰

A beneficiary of USAID/ASHA, the Universidad del Valle de Guatemala (UVG) demonstrated the societal benefits of investing in academic and medical facilities/equipment and building capacity to support the healthcare system, both directly and through the strengthening of the healthcare industry pipeline. UVG utilized equipment previously supported with ASHA funds to produce high purity alcohol, hand sanitizer, and other medical supplies.¹⁸¹ Engineering students began building ventilators to distribute to hospitals across the country,¹⁸² and mechanical engineering students utilized 3D printers to produce face shields for first responders and medical personnel.¹⁸³ UVG also supported the Ministry of Health and the regional U.S. Center for Disease Control and Prevention (CDC) office by making and donating culture media for throat swabs, culture tubes, and swabs.¹⁸⁴

Complementing their contributions to the healthcare system, UVG displayed epidemiologic leadership. Building upon an established relationship with the CDC, UVG helped to create a strategy for monitoring the outbreak as well as verifying and distributing test materials.¹⁸⁵ Further, the Center for Health Studies and Department of Computer Science have developed a mobile app through which people can self-report cases of COVID-19.¹⁸⁶

¹⁷⁹ Edwin Medina, "Laboratorios de USAC inician análisis de pruebas de COVID-19," SOY USAC, June 24, 2020, <https://soy.usac.edu.gt/?p=11813>.

¹⁸⁰ USAID Office of American Schools & Hospitals Abroad, "60 Year Anniversary Report," USAID, nd, https://www.usaid.gov/sites/default/files/documents/1866/ASHA_60th_Anniversary_Report-r.pdf.

¹⁸¹ Carmen Lucia Mejía, "En UVG producimos alcohol-gel, un proceso tecnológico industrial con responsabilidad," Universidad del Valle de Guatemala, April 10, 2020, <https://noticias.uvg.edu.gt/en-uvg-producimos-alcohol-gel-un-proceso-tecnologico-industrial-con-responsabilidad/>.

¹⁸² Pedro Barrera, "En UVG desarrollamos una máquina de ventilación automática," Universidad del Valle de Guatemala, April 13, 2020, <https://noticias.uvg.edu.gt/uvg-maquina-ventilacion-automatica-covid19/>.

¹⁸³ Pedro Barrera, "Nos unimos a la comunidad maker imprimiendo marcos para caretas de protección," Universidad del Valle de Guatemala, April 23, 2020, <https://noticias.uvg.edu.gt/marcos-caretas-proteccion-3d-uvg-dhive/>.

¹⁸⁴ Brenda Sosa, "COVID-19: Apoyamos la detección temprana y la vigilancia epidemiológica," Universidad del Valle de Guatemala, May 9, 2020, <https://noticias.uvg.edu.gt/covid-19-deteccion-temprana-y-vigilancia/>.

¹⁸⁵ Brenda Sosa, "El CES brinda asesoría para la compra de pruebas para COVID-19," Universidad del Valle de Guatemala, April 13, 2020, <https://noticias.uvg.edu.gt/ces-brinda-asesoria-para-covid-19/>.

¹⁸⁶ Brenda Sosa, "COVID-19: Apoyamos la detección temprana y la vigilancia epidemiológica," Universidad del Valle de Guatemala, May 9, 2020, <https://noticias.uvg.edu.gt/covid-19-deteccion-temprana-y-vigilancia/>.



Community Engagement

In this region, HEIs bolstered the public health response within their communities through the manufacturing and provision of items for healthcare and sanitation, supporting the healthcare workforce, and carrying out COVID-19 testing. As COVID-19 strained global supply chains, several HEIs throughout the region manufactured and/or donated PPE, hand sanitizer, laboratory equipment, and hand-washing stations to offset shortages.¹⁸⁷ To build staff capacity within COVID-19 testing facilities and hospitals, the UVG in Guatemala and INTEC in the Dominican Republic leveraged their staff and students' expertise to provide technical assistance and training to laboratory technicians carrying out COVID-19 testing for more than 300 hospital personnel.¹⁸⁸

Community support extended beyond just a public health response. In all observed countries, several HEIs donated nutritional kits to members of the broader community to alleviate the economic hardship caused by the pandemic.¹⁸⁹ In Guatemala, the Consortium of Guatemalan Universities (Consortio de Universidades de Guatemala)¹⁹⁰ partnered with the Ministry of Education to coordinate and contribute to an educational blog as part of the government's distance learning education program for children and youth in primary and secondary school, *Aprendo en Casa* (I learn at home).¹⁹¹ This initiative demonstrated the capacity of the HE system to strengthen and support the entire education system in the face of crisis.



Communications Strategy

National education agencies and HEIs generally employed a mixed-mode strategy for communicating COVID-19 updates, utilizing both official websites and social media to disseminate pertinent information. The majority of the observed government education agencies and HEIs had both Facebook and Twitter accounts, and a few also operated Instagram accounts. The most frequently used social media channel was Facebook.

Information disseminated about COVID-19 and higher education by national education agencies included passed resolutions pertaining to COVID-19, general health guidelines for reopening HEIs, lists of distance learning resources, updates on technical meetings, job postings for distance learning staff, and highlights of positive stories from the agency or from HEIs. These publications demonstrated national

¹⁸⁷ Institutions that produced these products to donate are identified in the Research and Innovation section. Many HEIs, in lieu of producing healthcare/public health products, collected and donated these items. A few examples include UNPHU, Dominican Republic; UPAN, Guatemala; Universidad Nacional de Concepción, Paraguay; and Universidad Nacional de Canindeyu, Paraguay.

¹⁸⁸ Brenda Sosa, "Contribuimos para fortalecer el procesamiento de pruebas en Quetzaltenango," Universidad del Valle de Guatemala, June 21, 2020, <https://noticias.uvg.edu.gt/pruebas-quetzaltenango/#gsc.tab=0>; Instituto Tecnológico de Santo Domingo, "INTEC y Ministerio de Salud Pública capacitan personal médico sobre el manejo del COVID-19," INTEC, March 20, 2020, <https://www.intec.edu.do/prensa/notas-de-prensa/item/intec-y-ministerio-de-salud-publica-capacitan-personal-medico-sobre-el-manejo-del-covid-19?fbclid=IwAR2Japb327F6LlgGtH8RFL6olnEVed9YyobtBphGI d6Wf2jVR6jhNzaet8>.

¹⁸⁹ Nutritional kits were donated by Universidad Dr. José Matías Delgado, El Salvador.

¹⁹⁰ The Consortium of Guatemalan Universities comprises ten universities including the Panamerican University, one of the HEIs in this analysis.

¹⁹¹ *Aprendo en Casa*, "Bienvenidos Al Blog Educativo," Ministry of Education, nd, <https://aprendoencasa.mineduc.gob.gt/index.php/blog?start=12>.

education agencies' commitment to promoting transparency of the decision-making process and their efforts to mobilize resources for crisis response.

Social media accounts of both government education agencies and HEIs often posted content beyond the education systems' crisis response such as information about COVID-19 trends, public health guidance, social assistance programs, and business-as-usual content. While this cross-sectoral communications approach via social media contributed to strengthening the pandemic response, it also appeared to hamper accessibility to critical education-specific content for key stakeholders. Government education agencies and some HEIs had official websites where this content was more organized and accessible, but there were several HEIs that did not have websites. The government and HEI websites with the greatest accessibility of COVID-19/education resources and updates often organized this information in a separate web page such as the "Higher Education in Paraguay in the Time of COVID-19" (Educación Superior del Paraguay en Tiempos de COVID-19) resource center on the CONES website.¹⁹²

Because of the cross-sectoral approach described above, national education agencies posted content on their social media accounts more frequently than their websites, supplementing the agency's content with reshared content from other agencies, both domestic and international. Generally, HEIs also updated their social media accounts and websites frequently. However, the substance of the communications were often about general COVID-19 trends as opposed to institution-specific information (e.g. upcoming operational changes as local COVID-19 positivity case rates changed). Several HEIs strategically linked content publication across social media platforms. In contrast, some HEIs published distinct yet relevant content for each channel, while a few, despite having accounts on multiple platforms, only utilized one.

To promote stakeholder engagement, HEIs often disseminated information about virtual workshops, roundtable discussions, conferences, and research initiatives related to COVID-19 and its impacts on various sectors. Many of these events and initiatives engaged education specialists from various countries throughout the region, a feat likely facilitated by the relative linguistic homogeneity of the LAC region and a strong precedence of regional collaboration.¹⁹³

Middle East and North Africa

Data for the Middle East and North Africa (MENA) regional analysis was drawn from three countries: Morocco, Egypt, and Lebanon. Sixteen HEIs were identified for this analysis, of which four were private and 12 public institutions. Coordination within the higher education system was observed from national ministries of education, with support from specialized ministries of higher education in Morocco and Egypt.¹⁹⁴

¹⁹² CONES, "Resumen actualizado al 12 de octubre de 2020," CONES, nd, <http://www.cones.gov.py/educacion-superior-del-paraguay-en-tiempos-de-covid-19/>.

¹⁹³ A few examples of long-established regional organizations that engaged HE authorities and staff on COVID-19 matters include: UNESCO International Institute for Higher Education in Latin America and the Caribbean; the Central American Higher Education Council (Consejo Superior Universitario Centroamericano); and the Organization of Ibero-American States for Education, Science and Culture.

¹⁹⁴ Annex B contains a list of observed national education ministries and agencies.

The MENA region presents a high level of complexity as it encompasses countries with protracted conflict and instability alongside those with more stable middle-income economies. A recent review of higher education activities in the region¹⁹⁵ elucidated consistent concerns about alignment of higher education to workforce needs. Higher education enrollment has also been consistently increasing over the years, but remains more than 30 percent below the enrollment in OECD countries.¹⁹⁶

Challenges in analyses from this region, particularly those arising from higher education initiatives, were severely compounded by linguistic barriers and disparate levels of information available on HEI websites and social media platforms. Furthermore, of the 19 countries in MENA, only three were selected for country-level analysis, which could suggest that the insights gained from the small sample size are not exhaustive of HEI, country, and regional responses to COVID-19.



Continuity of Learning

HEIs in Lebanon closed their campuses on February 28, 2020, with Egyptian and Moroccan HEIs following close behind on March 15/16, 2020.¹⁹⁷ Each received prompt, albeit generalized, guidance from national education agencies and national higher education agencies. As with other regions, national education agencies offered broad-ranging advice on the importance of staying home and projected timelines for when it would be possible to resume in-person class sessions. In particular, Morocco and Egypt aimed to maintain regularly scheduled exams, but also introduced alternative approaches to exams and validation of learning opportunities, and made health-related education guidance available.¹⁹⁸

Nearly every HEI disseminated the information to their respective communities and made additional modifications at the individual level. These individualized changes included circulating infographics detailing how learners could optimize their remote learning experiences on social media and school websites. The information in the infographics shared over Facebook ranged from proper COVID-19

¹⁹⁵ Jennifer L. Lebrón, Dr. Anne Griffin, and Dr. Robin DePietro-Jurand, “USAID Higher Education: Landscape Analysis 2014-2018,” USAID, November 2019, <https://www.edu-links.org/resources/usaaid-higher-education-landscape-analysis-2014-2018>.

¹⁹⁶ According to World Bank estimates, in 2018, HE enrollment in MENA was 41.9 percent versus 74.2 percent in OECD countries.

¹⁹⁷ U.S. Embassy in Egypt, “Health Alert: U.S. Embassy Cairo,” U.S. Department of State, March 24, 2020, <https://eg.usembassy.gov/health-alert-u-s-embassy-cairo-march-24-2020/>; <http://www.mapnews.ma/en/actualites/general/courses-suspended-morocco-march-16-until-further-notice>; Reuters, “Lebanon closes schools until March 8 to curb coronavirus spread,” Reuters, February 28, 2020, <https://www.reuters.com/article/health-coronavirus-morocco/morocco-to-close-all-schools-starting-march-16-over-coronavirus-fears-education-ministry-idUSL8N2B67A8>.

¹⁹⁸ Gwang-Chol Chang, Le Thu Huong, Rolla Mounne, Sharlene Bianchi and Elise Rondin, “COVID-19: A glance of national coping strategies on high-stakes examinations and assessments,” UNESCO, April 11, 2020, https://en.unesco.org/sites/default/files/unesco_review_of_high-stakes_exams_and_assessments_during_covid-19_en.pdf.

hygiene circulated by Hassan II University¹⁹⁹ to the American University of Cairo's mental health toolkit.²⁰⁰

Notably, in all three countries, educators were offered additional compensation and received online teaching tutorials to adapt to remote learning software. This could suggest that investing in educators' ability to teach was viewed as a way to ensure that learners had an optimal online educational experience. The HEIs included the American University of Beirut and the Lebanese American University. In Morocco, the Université Abdelmalek Essaadi Tanger (UAE) also circulated a survey over Facebook to assess learners' well-being and monitor their adaptation to distance learning.²⁰¹ In addressing issues of inclusion in regards to adapting to online learning, the UAE also made academic databases powered through Elsevier completely free for students.²⁰² Further, the Moroccan Ministry of National Education, Vocational Training, Higher Education, and Scientific Research set up an e-learning portal to ensure continuity in education.²⁰³

Spotlight: Access for All - It's Time for Sign



The Mansoura University Disability Service Center transferred its planned in-person class, "It's Time for Sign," to Facebook Live free for students. The first two online sessions in the twice-weekly series taught the basics of Egyptian sign language, the importance of lip reading, and tips for communication between hearing and non-hearing students. The videos reached 4,500 viewers and received enthusiastic feedback. Opportunities to learn Egyptian Sign Language are rare in a country with 3 million deaf people and only 15 to 20 highly skilled sign language interpreters.

The establishment of several Disability Service Centers at Egyptian public universities is a key component of USAID's "Local Scholarship Program." These Centers provide services to students with disabilities and assist university administrations to expand physical accessibility and establish other policies to better serve Egyptians with disabilities in line with new laws and regulations.



Research and Innovation

The countries studied for this landscape in the MENA region responded to the COVID-19 pandemic by producing advances in research and innovation spanning a variety of academic disciplines. Nearly all of the HEIs across Morocco, Egypt, and Lebanon launched calls for research and

¹⁹⁹ Université Hassan II de Casablanca, "Guide Sanitaire en Période des Examens," Facebook, September 2020, <https://www.facebook.com/photo?fbid=3461936073865258&set=pcb.3461936490531883>.

²⁰⁰ The American University in Cairo, "Taking Charge of Stress and Anxiety," AUC, nd, <https://www.aucegypt.edu/ar/node/16881>.

²⁰¹ Université Abdelmalek Essaadi, "Post," Facebook, May 18, 2020, <https://www.facebook.com/UniversiteAbdelmalekEssaadi/posts/3072382492869049>.

²⁰² Université Abdelmalek Essaadi, "Articles de recherche sur le Coronavirus disponibles sur Elsevier," Facebook, March 9, 2020, <https://www.facebook.com/UniversiteAbdelmalekEssaadi/posts/2909539255820041>.

²⁰³ Oxford Business Group, "The innovations behind Morocco's internationally praised Covid-19 response," OBG, May 20, 2020, <https://oxfordbusinessgroup.com/news/innovations-behind-morocco-s-internationally-praised-covid-19-response>.

development initiatives funded by the HEIs, including UAE Tanger and Hassan II University in Morocco and the American University of Cairo.²⁰⁴

Egyptian HEIs deepened their commitment to social science research, studying how individuals adapt to periods of crises. The American University of Cairo was one of the HEIs leading research on topics including but not limited to assessing COVID-19's effects on marginalized communities, social media's response to the pandemic, and how businesses can adapt and remain resilient in times of global uncertainty.²⁰⁵ HEIs in Egypt also provided funding for innovative learner-driven initiatives and community-oriented startup initiatives. Ain Shams University launched a ventilator design challenge fund to source a simple, sustainable, locally manufactured ventilator design.²⁰⁶ Similarly, the Venture Lab at the American University in Cairo (AUC) offered a special "Quarantine Clinic," providing community entrepreneurs with mentorship and consultation on the special challenges their startups faced during the pandemic.²⁰⁷ AUC also led universities across Egypt in realizing the importance of mental health after reviewing the results of surveys sent out to determine students' psychosocial well-being and their adjustments to online learning (which included questions related to mental health and adaptation to the changed living conditions under COVID-19). Unlike therapeutic research, which has focused on countering the virus, this new psychological research seeks to raise people's awareness of how they deal with COVID-19's consequences. This is in line with AUC's broader commitment to COVID-19-related research, with the university allotting 25 million Egyptian pounds (\$1.6 million USD) toward nine other projects spanning the physics, biology, sociology, psychology, education, and business administration fields.

Across Morocco, Egypt, and Lebanon, COVID-related medical research was at the forefront of HEIs' research agendas. In addition to in-person research initiatives, Morocco joined Tunisia and Algeria in implementing remote laboratories, in collaboration with other universities in Jordan, France, Spain, and Belgium, to allow learners to continue their education and promote new collaboration among researchers.²⁰⁸ Additional projects within the region focused on understanding the spread and potential cures of COVID-19, for example, whether certain genes suggest predisposition to COVID-19, whether enzymes carrying COVID-19 can reach the lungs, as well as drug-related treatments, and respirator

²⁰⁴ Ministère de l'Éducation Nationale, Formation Professionnelle, Enseignement Supérieur et Recherche Scientifique, "Note de cadrage destinée aux chercheurs de l'Université Hassan II de Casablanca," CNRST, nd, http://www.univh2c.ma/_files/fle_200412154228.pdf; Université Abdelmalek Essaadi, "Post," Facebook, June 3, 2020, <https://www.facebook.com/UniversiteAbdelmalekEssaadi/photos/a.1837974716309839/3109200852520546/?type=3&theater>; Wagdy Sawahel, "COVID-19 drives development of online laboratories," University World News, July 16, 2020, <https://www.universityworldnews.com/post.php?story=20200715130543961>.

²⁰⁵ Tarek Abd El-Galil, "Egyptian Universities Ramp Up Research to Meet Covid-19 Crisis," Al-Fanar Media, July 20, 2020, <https://www.al-fanarmedia.org/2020/07/egyptian-universities-ramp-up-research-to-meet-covid-19-crisis/>.

²⁰⁶ CairoScene, "ASU'S IHUB Just Announced a Ventilator Design Challenge to Help COVID-19 Patients," CairoScene, March 26, 2020, <https://cairoscene.com/Buzz/ASU-s-IHub-Just-Announced-a-Ventilator-Design-Challenge-to-Help-COVID-19-Patients>.

²⁰⁷ American University in Cairo, "AUC Venture Lab Goes Virtual," AUC, nd, <https://in.aucegypt.edu/news/announcements/auc-venture-lab-goes-virtual>.

²⁰⁸ Wagdy Sawahel, "COVID-19 drives development of online laboratories," University World News, July 16, 2020, <https://www.universityworldnews.com/post.php?story=20200715130543961>.

production.²⁰⁹ The American University of Beirut received commendation from the World Health Organization for its rapid systematic reviews on ventilation techniques, physical distancing and eye safety, and the safe management of bodies infected by COVID-19.²¹⁰

The pandemic also afforded Moroccan universities an opportunity to advance environmental research. For example, as a country that experiences frequent earthquakes, decreases in noise levels are allowing researchers to better record the “sounds” that earthquakes make. The research, carried out by the Moroccan Seismic Institute, significantly increased scientists’ ability to predict and understand earthquakes with more accuracy.²¹¹



Community Engagement

The onset of COVID-19 provided an opportunity for HEIs to facilitate opportunities for learners to engage with their broader communities. Individual examples in the MENA region suggest that this was facilitated mainly through technology-based platforms.

Learners remained socially engaged in part through the implementation of online awareness campaigns about the psychological and physical effects of the virus. Learners also shared hotline numbers provided by the Ministry of Health, coordinated with external service providers to deliver essentials to elderly populations, and distributed sanitizers, masks, and other hygiene products to vulnerable groups. Across these activities, student groups coordinated with charities and other local organizations.²¹² The AUC provided its wider community with online counselling services for mental well-being, while working to extend coverage to include local schools. As noted within the Research and Innovation section, Helwan University students supplied medical professionals with protective equipment, while Ain Shams University explored options for the production of affordable ventilators.²¹³ Lebanese American University was supportive of students who engaged in volunteer efforts, including students who were part of the USAID University Scholarship Program who became engaged with Beirut’s local Red Crescent chapter (see spotlight).²¹⁴

²⁰⁹ Tarek Abd El-Galil, “Egyptian Universities Ramp Up Research to Meet Covid-19 Crisis,” Al-Fanar Media, July 20, 2020, <https://www.al-fanarmedia.org/2020/07/egyptian-universities-ramp-up-research-to-meet-covid-19-crisis/>; Ain Shams University, “A large research team of Ain Shams University to face Corona,” ASU, April 19, 2020, <http://www.asu.edu.eg/1118/news>.

²¹⁰ Sally Abou Melhem, “New COVID-19 studies co-led by AUB researchers and commissioned by WHO impact policy and receive global attention,” American University of Beirut, July 6, 2020, <https://www.aub.edu.lb/articles/Pages/New-COVID-19-studies-co-ledby-AUB-researchers.aspx>.

²¹¹ Madelyn Haden, “Studies During the Pandemic Could Help Predict Morocco’s Earthquakes,” Morocco World News, August 1, 2020, <https://www.moroccoworldnews.com/2020/08/313316/studies-during-the-pandemic-could-help-predict-moroccos-earthquakes/>.

²¹² UNESCO, “UNESCO learning cities’ responses to COVID-19 – outcomes of webinar on 15 April,” UNESCO Institute for Lifelong Learning, April 22, 2020, <https://uil.unesco.org/unesco-learning-cities-responses-covid-19-outcomes-webinar-15-april>.

²¹³ Ibid.

²¹⁴ USAID/Lebanon, “Mahmoud Basma,” Facebook, April 16, 2020, <https://www.facebook.com/usaidlebanon/posts/1565582880273970>.

Spotlight: Service Learning at Work



Every day, students under the University Scholarship Program funded by USAID at the Lebanese American University (LAU) are developing a sense of purpose and enriching their lives and the lives of others through a range of volunteering initiatives. Mahmoud Basma, a student in the program has taken the response to #COVID19 to heart.

With relentless dedication and a fearless outlook, Mahmoud volunteered with the Lebanese Red Cross to assist them in their nationwide efforts to raise awareness on COVID-19 through a range of initiatives. A paramedic in the Red Crescent since February 2019, Mahmoud capitalized on his experience and training as a first aid provider to help transport suspected COVID-19 cases to Rafiq Al Hariri University Hospital. Mahmoud also conducted awareness sessions, in cooperation with official and educational bodies and NGOs, in his hometown to minimize the spread of COVID-19. He went even further by embarking on an effort to disinfect public areas in his hometown including schools, houses of worship, the municipality, scouts meeting hall, and public gardens.

Mahmoud isn't the only USP scholar to put his service learning experience from USP into action; others USP scholars have played a role in their local community's response to COVID-19.



Communications Strategy

Communication strategies varied widely across individual HEIs, but prioritized disseminating their respective national education agencies and health agencies' advice and updates regarding COVID-19, as well as corresponding educational policy changes. Across the region, HEI websites and social media platforms, particularly Facebook, Twitter, WhatsApp, and YouTube, were used not only to communicate health and education information, but also to promote remote learning and assess the ways in which remote learning was being carried out. According to a study carried out by researchers at King Faisal University in Saudi Arabia, the American University of Cairo, Helwan University in Egypt, and Future Academy in Egypt, while students made use of social media to build an online community and support each other, faculty members used social media to focus more exclusively on learning and education.²¹⁵

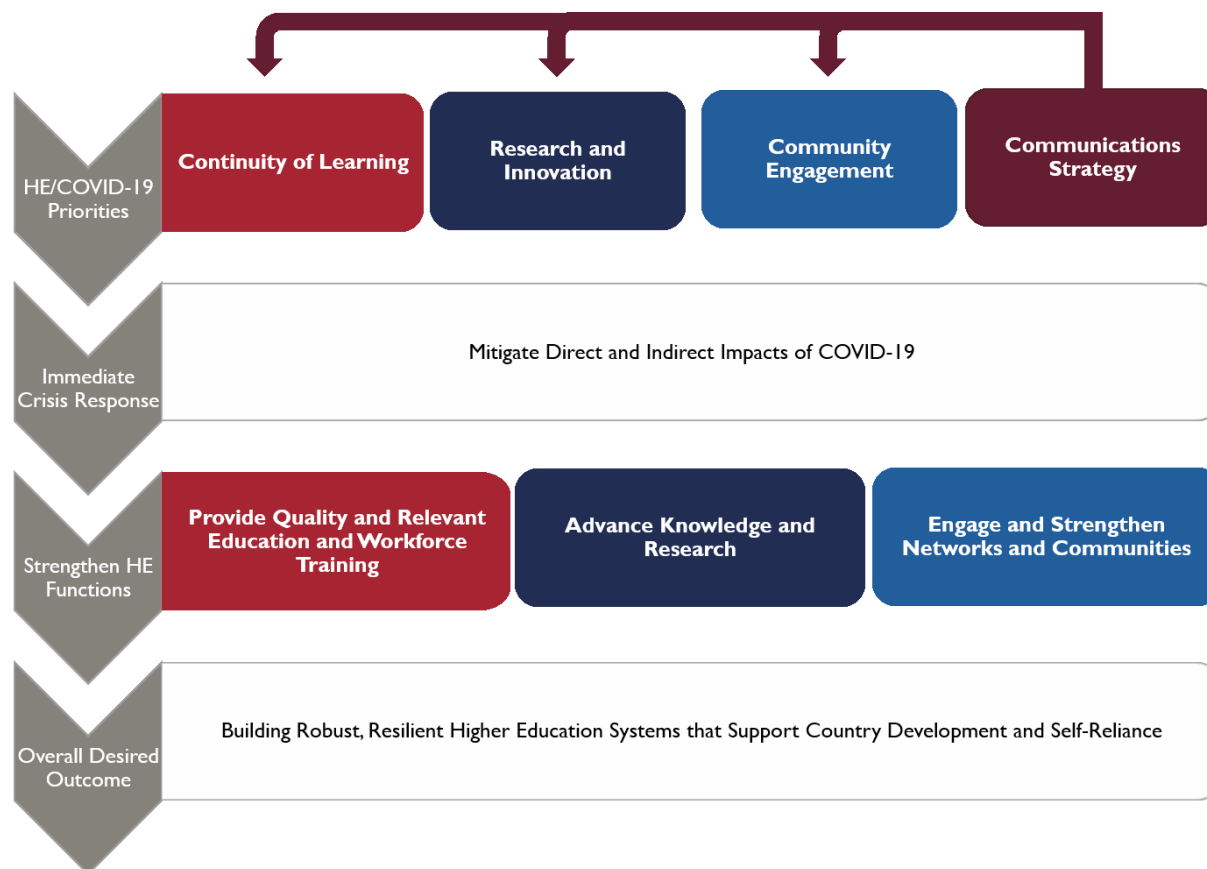
²¹⁵ Abu Elnasr E. Sobaih, Ahmed M. Hasanein, and Ahmed E. Abu Elnasr, "Responses to COVID-19 in Higher Education: Social Media Usage for Sustaining Formal Academic Communication in Developing Countries," *Sustainability* 2020, 12(16), 6520, <https://www.mdpi.com/2071-1050/12/16/6520/htm>.

5. CONCLUSIONS & RECOMMENDATIONS

Confronted with the sudden disruption to learning and livelihoods caused by COVID-19, higher education systems and institutions demonstrated resilience and showed the potential for how HE can serve as a central actor in both crisis response and locally led development. To further cultivate this potential, HEIs must use this learning opportunity to build robust, resilient higher education systems that can withstand unforeseen shocks, enabling them to support their countries and communities.

Figure 4 illustrates a framework for aligning the four key interest areas of this landscape map with the USAID Higher Education Program Framework. As global trends within the four areas were defined, opportunities for strengthening the resilience and capacity of HE systems were investigated with the possibility of improvement or expansion. To identify these opportunities, the trends were assessed against criteria synthesized from COVID-19 guidelines and recommendations from global education/development actors and relevant evidence (see Annex D).²¹⁶

FIGURE 4. FRAMEWORK FOR APPLYING LESSONS FROM COVID-19 TO STRENGTHEN HIGHER EDUCATION SYSTEMS



²¹⁶ USAID, UNESCO, UNHCR, INEE, as well as relevant literature.

Global Trends, Opportunities, and Challenges

This data collection and analysis at the regional level yielded insights into global trends, the opportunities for improvement of crisis response by building institutional capacity and strengthening resilience of HE systems, and the challenges limiting the ability of HEIs and government education agencies to do so. Along with the identification of actions and initiatives that merit further monitoring for potential development of best practices for the role of higher education in navigating COVID-19 or other future crises, these insights provide a bridge between the purpose and scope of this research and the potential impacts of programmatic support and engagement in alignment with USAID higher education priorities.

TABLE 3. GLOBAL TRENDS, OPPORTUNITIES, AND CHALLENGES

KEY AREA OF INTEREST	TREND	OPPORTUNITIES	CHALLENGES
Continuity of Learning	Governments and HEIs sought to provide distance learning opportunities, but faced equity and accessibility challenges due to the pre-existing digital divide and the constraints of resources and capacity to fully bridge that gap.	Public-private partnerships (PPP) to expand digital access and infrastructure PPP to develop learning platforms and resources Inclusion efforts to lift up marginalized groups	Access to/coverage of Internet Access to digital devices Lack of learning platforms techniques Lack of knowledge of distance learning pedagogy
Continuity of Learning	National education agencies, where a dedicated national higher education agency was not established, often focused on designing plans and developing resources for the basic and secondary level, leaving HEIs largely responsible for crafting their own plans.	Develop contingency plans and distance learning competency (training, access, and transition plan) within HEIs Stronger emphasis on distance learning competency within teachers colleges Research effective governance structures and practices for HE during crises Collaboration networks and platform-sharing across public or public/private universities	Preserving institutional autonomy of HEIs while providing adequate support from the government Educators: limited guidance on transitioning coursework Students: adjusting to constantly evolving plans with limited resources for support
Research and Innovation (R&I)	Many HEIs produced locally sourced innovative solutions including personal protective equipment, sanitizing supplies, testing materials, and low-cost ventilators. In fact, in every region, at least one HEI produced locally sourced low-cost ventilators, suggesting it was the top priority for rapid innovation during the COVID-19 crisis. The institutions that successfully produced PPE displayed a strong precedence of research and innovative capability.	Investing in capital and skills acquisition for R&I Facilitating university partnerships and consortiums Establishing private sector collaborations to produce R&I, as well as provide practical-based learning opportunities Social science R&I expansion	HEIs in low-income/early industrial/geographically isolated contexts may lack resources within the institution with few alternative sources of funding or collaboration from the public or private sector to allow R&I to flourish

KEY AREA OF INTEREST	TREND	OPPORTUNITIES	CHALLENGES
Community Engagement	HEIs supported the local community by providing public health-focused services including PPE donations, mental health counseling, nutritional kits, and some shared information about nutritional programs and social assistance programs. Community engagement was generally informal and not through established partnerships with for example NGOs.	Developing service learning opportunities and a culture of engaged scholarship to address local issues Studying the role of HEIs in disseminating information and increasing uptake of social programs during crises, with particular focus on reaching the most vulnerable	Donations to the community were often crowd-sourced from HEI members. Communities that overall are under-resourced may be unable to provide for their communities to the same extent as other HEIs. If information sharing about public health and social assistance programs is limited to online dissemination by HEIs, those most likely to benefit may not have access.
Communications Strategy	Official webpages served as sources for key documents and highlighting newsworthy stories. Social media elevated content from official websites as well as breaking news. Organization and coordination of communications platforms varied within/across regions.	Support development of communications and ICT capacity of HEIs/government education agencies to craft effective/ efficient communications strategies and website design Partnerships that promote strengthening of communications capacity	Lack of resources to hire and/or train communications specialists Lack of resources to hire and/or train ICT specialists

Potential Future Impact Research Areas

The COVID-19 pandemic has disrupted global systems, including higher education, in unprecedented ways. It also provides a unique research opportunity to better understand how HEIs and systems plan for and respond to crises. In this vein, it may prove to be beneficial to consider the further monitoring of:

1. How HEIs are able to institutionalize ICT usage and distance education practices may yield insight into the resilience of the institution in the event of future crises.
2. The creation and implementation of crisis response plans may yield insight into the future preparedness for crisis response.
3. HE outcomes (e.g. dropout, transition, completion, and employment rates) may yield insight into areas for targeted support. Analysis of the relationship between the observed outcomes and mitigation efforts by governments and HEIs within the context of the country and the institution may also inform best practices to be incorporated into crisis response plans.
4. Efforts to address inclusion and accessibility concerns and forthcoming enrollment and completion of higher education programs may yield insight into the success of continuity of learning endeavors.

5. Sources of funding and outputs of innovation and research opportunities, disaggregated by level of country income and product type, may yield insight into the value of partnerships and capacity existing at HEIs.
6. Public private partnerships evolving from within this period of crisis may yield insight into the ability of HEIs to think beyond immediate crises. Survivability is not the only concern of HEIs and national agencies, and viability in the long term may need to engage government, business, and societal stakeholders to maintain higher education's role as a central actor in country development.
7. Cross-sectoral content consistently updated via official web pages and social media pages may yield insight into the level of engagement between HEIs and their community.

Recommendations

Arising primarily from the opportunities and challenges in Table 4, the following recommendations build on both the regional analysis and global assessment conducted through this landscape study. They represent practices best suited to highlighting higher education's role as a central actor in country development and crisis response. Further framing of the recommendations comes via the USAID Higher Education Program Framework, 2018 USAID Education Policy, and the Positive Youth Development Framework.²¹⁷










While HEIs serve as the primary actors through which to increase development capacity in each country, they cannot accomplish this task in isolation. As such, three primary types of audiences are identified for viewing and acting upon recommendations included within this report: higher education system-level; country/government-level; and partner/donor-level.

- Higher education system-level audiences include the leadership and administrative teams at HEIs themselves and may further involve stakeholders from within faculty/staff and learner populations.
- Country/government-level audiences include national education agencies and partner organizations within each country who have oversight, programmatic control, and/or support the initiatives of HEIs.
- Partner/donor-level audiences may include USAID staff (Bureaus, Offices, and Missions), international development organizations invested in building country capacity, governments interested in the same, and/or private firms able to further engage and support the development and improvement of HEIs in each country.

Recommendations are listed below with a primary target audience noted, however, recommendations may have applicability across multiple audiences. Figure 5 includes notation for the multiple audiences to which each recommendation may be applicable.

²¹⁷ The USAID HE Program Framework contains three primary pathways for creating impact: advancing knowledge and research; providing quality and relevant education and workforce training; and engaging and strengthening networks and communities.

FIGURE 5. PRIMARY/SECONDARY AUDIENCES FOR RECOMMENDATIONS²¹⁸

		System Level	Country Level	Donor Level
	Faculty Support and Learning	X	X	
	Research Sharing Platform	X	X	
	Innovation Ecosystem Creation	X	X	
	Funding and Support		X	X
	Community Relationships	X		X
	Knowledge Sharing Platform	X		X
	Crisis Response Strategy		X	X
	ID and Support Future Leaders		X	X
	Cross-Regional Engagement	X		X

Primary Target Audience: Higher Education System

1. **Continuity of Learning - Faculty Support and Learning:** Furthering the development of faculty/staff strategies to support delivery of remote instruction and building administration support can encourage a coordinated and inclusive response beyond the classroom.
Secondary Target Audience: Country/Government
2. **Research and Innovation - Research Network:** A network for research and innovation across HEIs to connect academics to share ideas, prospective and ongoing research, and innovative solutions. This network could be further strengthened by broadening access for other scholars to engage in and offer assistance in research from other HEIs as well as allowing

²¹⁸ The vertical axis shows recommendations from within the report categorized by theme. Themes noted include continuity of learning, research and innovation, communications, and community engagement. The target audiences for each recommendation are listed across the horizontal axis. An X marks where each recommendation may be applicable to the noted audience. Primary audience is noted with a dark grey X, while the secondary audience is noted with a light grey X.

country/government-level engagement on key research questions to aid evidence-based policy decisions.

Secondary Target Audience: Country/Government

3. **Communications - Cross-Regional Engagement and Partnerships:** Opportunities for HEIs to collaborate amongst each other or with HEIs regionally/internationally to prosper and strengthen the partnerships. Cross-regional activities designed to simultaneously tackle some of the difficulties commonly experienced across countries.

Secondary Target Audience: Partners/Donors

Primary Target Audience: *Country/Government*

1. **Research and Innovation - Innovation Ecosystem Creation:** There is also a need to leverage existing global networks or partnerships to share a coordinated response across regions. An innovation ecosystem should be considered when furthering the development of global partnerships.

Secondary Target Audience: HE Systems

2. **Research and Innovation - Funding and Support:** Continuing to support the advancement of R&I within HEIs through programs that improve infrastructure and procure equipment and materials, as well as partnerships that build capacity. Having observed the many benefits for crisis response of R&I investment in HEIs, the strengthening of this capacity not only benefits country development under normal circumstances, but also may contribute to country resilience to unexpected shocks.

Secondary Target Audience: Partners/Donors

Primary Target Audience: *Partners/Donors*

1. **Communications - Knowledge Sharing Platform:** A platform through which COVID-19 impact, response, and mitigation knowledge can be shared across the USAID network and amongst USAID programs. Data-driven implementation in tandem with collaborative efforts across the USAID network will offer increased opportunities to share learnings gained during the pandemic, build more resilient systems, and assist countries along the path to self-reliance.

Secondary Target Audience: HE Systems

2. **Community Engagement - Community Relationships:** Furthering the community support provided during the pandemic, partners/donors should consider assisting HEIs with integrating themselves more deeply within their communities, establishing relationships and building capacity within HEIs to work collaboratively with the broader community in the design of solutions to local issues. Increased opportunities for community-embedded or service-based learning helps to develop practical skills for employability among learners and empowers HEIs to serve as development actors.

Secondary Target Audience: HE Systems

3. **Communications - Crisis Response Strategy:** Encouragement of a cohesive communication strategy for HEIs and government education agencies in response to crisis. An easily navigable and dedicated webpage with relevant and timely updates, through multiple media channels, has proven effective in communications during COVID-19. Preparation for the

continuation or reactivation of such a platform can ensure easy access to critical information for local stakeholders and can improve upon network and community engagement in future crisis situations.

Secondary Target Audience: Country/Government

4. **Continuity of Learning - Youth/Civic Engagement to Identify and Support Future Leaders:** Continuity of learning should be recognized to extend beyond just technical or academic lessons but also include additional leadership and social and emotional skills. Moments of crisis offer unique opportunities for paradigm shifts and leadership roles. Programmatic partnerships with Positive Youth Development principles allow increased opportunities for higher education learner populations to act as key levers of national crisis response and as future leaders in country development.²¹⁹ With increased resources and training for future leaders as part of regular coursework and lessons, USAID initiatives can offer a demonstrable belief in their abilities and encourage ownership of the civic responsibility necessary to create sustainable change.

Secondary Target Audience: HE Systems

²¹⁹ YouthPower2, “Promoting Positive Youth Development,” USAID, nd, <https://www.youthpower.org/positive-youth-development>.

6. FOR FURTHER READING: CASE STUDIES

Three initial case studies were identified from within the HEIs and countries analyzed to serve as in-depth explorations of the initial response to COVID-19. Specific focus is paid to the thematic topics of communication, inclusion, youth engagement, continuity of learning, public health, and innovation.

- **Malawi:** Research & Rapid Innovation; HEIs supporting Public Health
This case study examines the role of partnerships on expanding research and innovation capacity within HEIs. Highlighting the Innovation Scholars Program implemented by Michigan State University with USAID support, the study illustrates the increased R&I capacity developed among LUANAR and MUST scholars and how this increased capacity provides broad societal benefits, particularly during a crisis.
- **Philippines:** Continuity of Learning and Community Engagement
This case study examines the University of the Philippine's holistic approach to COVID-19 response, and their work toward development of a sustainable, virtual learning system that engages those affiliated with the HEI along with the local community. The four key areas of interest from the COVID-19 HE Landscape Map serve as the framework through which the actions are evaluated: research and innovation, continuity of learning, community engagement, and communications strategies.
- **Senegal:** Youth Engagement in Crisis Response
This case study examines the role of youth engagement in responding to the COVID-19 crisis and the impact of productive and socially conscious students in national development. Focused on the efforts of Senegalese university coalition and student initiative, 100,000 Students Against COVID-19, the case explores the role of communications, civic engagement, and partnership in youth taking an ownership stake in the future of their country and providing assistance in a time of crisis.

Access these case studies and other education and COVID-19 resources at <https://www.edulinks.org/COVID-19>.

ANNEX A: COUNTRY TABLES

TABLE 1. CLOSURE DATES BY INSTITUTION

REGION	COUNTRY	INSTITUTION	DATE CLOSED	DATE OF FIRST CASE
Africa	Ghana	University Education Winneba	3/15/2020	3/14/2020
Africa	Ghana	KNUST	3/15/2020	3/14/2020
Africa	Ethiopia	Bahir Dar University	3/15/2020	3/13/2020
Africa	Ethiopia	Hawassa Poly Technique College	3/15/2020	3/13/2020
Africa	Ethiopia	Holeta Polytechnic College	3/15/2020	3/13/2020
Africa	Ethiopia	Adalale TVET College	3/15/2020	3/13/2020
Africa	Ethiopia	Alamata Technical College	3/15/2020	3/13/2020
Africa	Ethiopia	Bahir Dar Polytechnic College	3/15/2020	3/13/2020
Africa	Ethiopia	Bishoftu Poly Technique College	3/15/2020	3/13/2020
Africa	Ethiopia	Hawassa University	3/15/2020	3/13/2020
Africa	Ethiopia	Jigjiga Polytechnique College	3/15/2020	3/13/2020
Africa	Ethiopia	Jimma University	3/15/2020	3/13/2020
Africa	Ethiopia	Mekelle University	3/15/2020	3/13/2020
Africa	Senegal	Centre Africain d'Etudes Suprieures en Gestion (CESAG)	3/16/2020	3/2/2020
Africa	Senegal	Ecole Nationale Suprieure d'Agriculture	3/16/2020	3/2/2020
Africa	Senegal	Université Cheikh Anta Diop de Dakar	3/16/2020	3/2/2020
Africa	Senegal	University of Ziguinchor	3/16/2020	3/2/2020
Africa	Senegal	Université Gaston Berger	3/17/2020	3/2/2020
Africa	Kenya	Kenyatta University, Nairobi, Kenya	3/17/2020	3/13/2020
Africa	Nigeria	Bayero University of Kano	3/20/2020	2/28/2020
Africa	Uganda	Makerere University	3/20/2020	3/21/2020
Africa	South Africa	University of South Africa (UNISA) School of Business Leadership (SBL)	3/20/2020	3/5/2020
Africa	Malawi	Malawi Polytechnic	3/22/2020	4/2/2020
Africa	Nigeria	Aminu Saleh College of Education	3/23/2020	2/28/2020
Africa	Ghana	Aseshi University	3/30/2020	3/14/2020

REGION	COUNTRY	INSTITUTION	DATE CLOSED	DATE OF FIRST CASE
Asia	Vietnam	Da Nang University of Science and Technology	2/6/2020	1/23/2020
Asia	Vietnam	Hue University of Medicine and Pharmacy	2/6/2020	1/23/2020
Asia	Vietnam	Industrial University of HCMC	2/6/2020	1/23/2020
Asia	Vietnam	Lac Hong University	2/6/2020	1/23/2020
Asia	Vietnam	Thai Nguyen University of Medicine and Pharmacy	2/7/2020	1/23/2020
Asia	Vietnam	Hanoi University of Science and Technology	2/7/2020	1/23/2020
Asia	Vietnam	Can Tho University	2/7/2020	1/23/2020
Asia	Vietnam	VNU Hanoi	2/14/2020	1/23/2020
Asia	Pakistan	University of Karachi, Karachi	3/1/2020	2/25/2020
Asia	Vietnam	The Fulbright University of Vietnam	3/3/2020	1/23/2020
Asia	Philippines	De La Salle University	3/9/2020	1/30/2020
Asia	Philippines	University of Santo Tomas	3/9/2020	1/30/2020
Asia	Philippines	Technological Institute of the Philippines	3/10/2020	1/30/2020
Asia	Afghanistan	Kabul University	3/14/2020	2/24/2020
Asia	Afghanistan	Kabul Polytechnic University	3/14/2020	2/24/2020
Asia	Afghanistan	Kabul University of Medical Sciences	3/14/2020	2/24/2020
Asia	Afghanistan	Nangarhar University	3/14/2020	2/24/2020
Asia	Afghanistan	Kandahar University	3/14/2020	2/24/2020
Asia	Afghanistan	Herat University	3/14/2020	2/24/2020
Asia	Afghanistan	Kunduz University	3/14/2020	2/24/2020
Asia	Afghanistan	Khost University (Shaikh Zayed)	3/14/2020	2/24/2020
Asia	Afghanistan	Jowzjan University	3/14/2020	2/24/2020
Asia	Pakistan	National University of Science and Technology, Islamabad	3/14/2020	2/25/2020
Asia	Philippines	Don Mariano Marcos Memorial State University	3/14/2020	1/30/2020
Asia	Philippines	Palawan State University	3/14/2020	1/30/2020
Asia	Pakistan	Islamia University, Bahawalpur	3/15/2020	2/25/2020
Asia	Pakistan	Lahore College for Women University, Lahore	3/15/2020	2/25/2020

REGION	COUNTRY	INSTITUTION	DATE CLOSED	DATE OF FIRST CASE
Asia	Pakistan	University of Agriculture, Faisalabad	3/15/2020	2/25/2020
Asia	Pakistan	University of Azad Jammu and Kashmir, Muzaffarabad	3/15/2020	2/25/2020
Asia	Pakistan	University of Engineer and Technology, Peshawar	3/15/2020	2/25/2020
Asia	Pakistan	University of Health Sciences, Lahore	3/15/2020	2/25/2020
Asia	Pakistan	University of Punjab, Lahore	3/15/2020	2/25/2020
Asia	Pakistan	Fatima Jinnah Women University, Rawalpindi	3/16/2020	2/25/2020
Asia	Philippines	University of Science and Technology of Southern Philippines	3/16/2020	1/30/2020
Asia	Philippines	University of the Philippines	3/20/2020	1/30/2020
Asia	Philippines	Western Mindanao University	3/20/2020	1/30/2020
Asia	Afghanistan	American University of Afghanistan	3/21/2020	2/24/2020
Asia	Vietnam	Hai Phong University of Medicine and Pharmacy	3/26/2020	1/23/2020
Asia	Philippines	Cebu Institute of Tech	3/28/2020	1/30/2020
Asia	Indonesia	Gajah Mada University	3/31/2020	3/2/2020
Asia	Indonesia	Istitut Teknologi Bandung	3/31/2020	3/2/2020
Asia	Indonesia	Udayana University	3/31/2020	3/2/2020
Asia	Indonesia	Universitas Indonesia	3/31/2020	3/2/2020
Asia	Indonesia	Universitas Diponogoro	3/31/2020	3/2/2020
Asia	Indonesia	Universitas Kuningan	3/31/2020	3/2/2020
Asia	Indonesia	Universitas Muhamadiyah Malang	3/31/2020	3/2/2020
Asia	Indonesia	Universitas Negeri Surabaya	3/31/2020	3/2/2020
Asia	Indonesia	Universitas Pembangunan Nasional Veteran	3/31/2020	3/2/2020
Asia	Indonesia	Universitas Pendidikan Indonesia	3/31/2020	3/2/2020
E&E	Georgia	ILIA State University	3/10/2020	2/26/2020
E&E	Georgia	Tbilisi State Medical University	3/10/2020	2/26/2020
E&E	Georgia	Agricultural University of Georgia	3/10/2020	2/26/2020
E&E	Georgia	New Vision University (NVU)	3/10/2020	2/26/2020
E&E	Moldova	State Pedagogical University “Ion Creanga”	3/10/2020	3/8/2020

REGION	COUNTRY	INSTITUTION	DATE CLOSED	DATE OF FIRST CASE
E&E	Bosnia and Herzegovina	University of Banja Luka	3/11/2020	3/5/2020
E&E	Georgia	New Vision University (NVU)	3/12/2020	2/26/2020
E&E	Kosovo	University of Pristina (UP)	3/12/2020	3/26/2020
E&E	Bosnia and Herzegovina	University of Mostar	3/13/2020	3/5/2020
E&E	Bosnia and Herzegovina	University of Tuzla	3/17/2020	3/5/2020
E&E	Bosnia and Herzegovina	University of Sarajevo	3/23/2020	3/5/2020
LAC	El Salvador	National University of El Salvador	3/11/2020	3/19/2020
LAC	Paraguay	Instituto Desarrollo	3/11/2020	3/8/2020
LAC	Paraguay	National University of Concepcion (UNC)	3/11/2020	3/8/2020
LAC	Paraguay	National University of Canindeyu (UNICAN)	3/11/2020	3/8/2020
LAC	Paraguay	National Institute for Higher Education (INAES)	3/11/2020	3/8/2020
LAC	El Salvador	José Simeón Cañas Central American University	3/11/2020	3/19/2020
LAC	El Salvador	Technological University	3/12/2020	3/19/2020
LAC	Paraguay	National University of Asuncion	3/12/2020	3/8/2020
LAC	Dominican Republic	Universidad Católica Santo Domingo (UCSD)	3/13/2020	3/1/2020
LAC	Paraguay	National University of the East (UNE)	3/13/2020	3/8/2020
LAC	Guatemala	Universidad de San Carlos de Guatemala	3/15/2020	3/14/2020
LAC	Guatemala	Universidad Panamericana de Guatemala	3/15/2020	3/14/2020
LAC	Guatemala	Universidad del Valle de Guatemala	3/16/2020	3/14/2020
LAC	Dominican Republic	Universidad Iberoamericana (UNIBE)	3/16/2020	3/1/2020
LAC	Dominican Republic	Universidad Nacional Pedro Henríquez Ureña	3/16/2020	3/1/2020
LAC	Dominican Republic	Universidad Autónoma de Santo Domingo	3/17/2020	3/1/2020
LAC	Dominican Republic	Universidad Católica Tecnológica del Cibao	3/17/2020	3/1/2020
LAC	Dominican Republic	Universidad Central del Este	3/17/2020	3/1/2020

REGION	COUNTRY	INSTITUTION	DATE CLOSED	DATE OF FIRST CASE
LAC	Dominican Republic	Universidad Dominicana O&M	3/17/2020	3/1/2020
LAC	Dominican Republic	Pontificia Universidad Católica Madre y Maestra	3/17/2020	3/1/2020
LAC	Dominican Republic	Instituto Tecnológico De Santo Domingo (INTEC)	3/17/2020	3/1/2020
LAC	El Salvador	Catholic University of El Salvador	3/17/2020	3/19/2020
LAC	El Salvador	Francisco Gavidia University	4/12/2020	3/19/2020
LAC	El Salvador	Don Bosco University	4/29/2020	3/19/2020
LAC	El Salvador	Dr. José Matías Delgado University	4/29/2020	3/19/2020
LAC	El Salvador	Central American Technological Institute	4/29/2020	3/19/2020
MENA	Lebanon	American University of Beirut	3/12/2020	2/21/2020
MENA	Morocco	Specialized Institute of Applied Technology Hay Hassani I	3/13/2020	3/2/2020
MENA	Lebanon	Lebanon American University	3/14/2020	2/21/2020
MENA	Egypt	Modern University	3/14/2020	2/14/2020
MENA	Egypt	South Valley University	3/15/2020	2/14/2020
MENA	Egypt	Alexandria University	3/15/2020	2/14/2020
MENA	Egypt	Cairo University	3/15/2020	2/14/2020
MENA	Egypt	Helwan University	3/15/2020	2/14/2020
MENA	Egypt	Zagazig University	3/15/2020	2/14/2020
MENA	Morocco	UAE Tanger	3/16/2020	3/2/2020
MENA	Morocco	Universit Cadi Ayyad de Marrakech, la Facul des Sciences et Techniques	3/16/2020	3/2/2020
MENA	Egypt	Ain Shams University	3/17/2020	2/14/2020
MENA	Egypt	Mansoura University	3/18/2020	2/14/2020
MENA	Egypt	Port Said University	3/21/2020	2/14/2020
MENA	Egypt	American University of Cairo	3/22/2020	2/14/2020

TABLE 2. HEIS BY REGION AND COUNTRY

INSTITUTION	PUBLIC OR PRIVATE	LOCATION (CITY)	COUNTRY	REGION
Adola TVET College	Public	Addis Ababa	Ethiopia	Africa
Alamata Technical College	Public	Alamata	Ethiopia	Africa
Bahir Dar Polytechnic College	Public	Bahir Dar	Ethiopia	Africa
Bahir Dar University	Public	Bahir Dar	Ethiopia	Africa
Bishoftu Poly Technique College	Public	Bishoftu	Ethiopia	Africa
Hawassa Poly Technique College	Public	Hawassa	Ethiopia	Africa
Hawassa University	Public	Hawassa	Ethiopia	Africa
Holeta Polytechnic College	Public	Holeta	Ethiopia	Africa
Jigjiga Polytechnique College	Public	Jigjiga	Ethiopia	Africa
Jimma University	Public	Jimma	Ethiopia	Africa
Mekelle University	Public	Mek'ele	Ethiopia	Africa
Aseshi University	Private	Accra	Ghana	Africa
Ghana Institute of Management and Public Administration (GIMPA)	Public	Multiple	Ghana	Africa
KNUST	Public	Kumasi	Ghana	Africa
University Education Winneba	Public	Winneba	Ghana	Africa
Kenyatta University, Nairobi, Kenya	Public	Nairobi	Kenya	Africa
Chancellor College	Public	Zomba	Malawi	Africa
Lilongwe University of Agriculture and Natural Resources (LUANAR)	Public	Lilongwe	Malawi	Africa
Malawi Polytechnic	Public	Blantyre	Malawi	Africa
MUST	Public	Limbe	Malawi	Africa
Adamu Tafawa Balewa Kangere College of Education	Public	Kangere	Nigeria	Africa
Aminu Saleh College of Education	Public	Azare	Nigeria	Africa
Bayero University of Kano	Public	Kano	Nigeria	Africa

INSTITUTION	PUBLIC OR PRIVATE	LOCATION (CITY)	COUNTRY	REGION
Shehu Shagari College of Education	Public	Farfaru	Nigeria	Africa
Centre Africain d'Etudes Supérieures en Gestion (CESAG)	Public	Dakar	Senegal	Africa
Ecole Nationale Supérieure d'Agriculture	Public	Thies	Senegal	Africa
Université Cheikh Anta Diop de Dakar	Public	Dakar	Senegal	Africa
University Gaston Berger	Public	Saint Louis	Senegal	Africa
University of Ziguinchor	Public	Casamance	Senegal	Africa
University of South Africa (UNISA) School of Business Leadership (SBL)	Public	Pretoria	South Africa	Africa
Gulu University	Public	Kampala	Uganda	Africa
Makerere University	Public	Kampala	Uganda	Africa
American University of Afghanistan	Private	Kabul	Afghanistan	Asia
Herat University	Public	Herat	Afghanistan	Asia
Jowzjan University	Public	Jowzjan Province	Afghanistan	Asia
Kabul Polytechnic University	Public	Kabul	Afghanistan	Asia
Kabul University	Public	Kabul	Afghanistan	Asia
Kabul University of Medical Sciences	Public	Kabul	Afghanistan	Asia
Kandahar University	Public	Kandahar	Afghanistan	Asia
Khost University (Shaikh Zayed)	Public	Khost	Afghanistan	Asia
Kunduz University	Public	Kunduz	Afghanistan	Asia
Nangarhar University	Public	Jalalabad	Afghanistan	Asia
Gajah Mada University	Public	Yogyakarta	Indonesia	Asia
Istitut Teknologi Bandung	Public	Bandung	Indonesia	Asia
Udayana University	Public	Jimbaran, Badung	Indonesia	Asia
Universitas Indonesia	Public	Depok & Central Jakarta	Indonesia	Asia

INSTITUTION	PUBLIC OR PRIVATE	LOCATION (CITY)	COUNTRY	REGION
Universitas Diponogoro	Public	Semarang	Indonesia	Asia
Universitas Kuningan	Private	Kuningan	Indonesia	Asia
Universitas Muhamadiyah Malang	Private	Malang	Indonesia	Asia
Universitas Negeri Surabaya	Public	Surabaya	Indonesia	Asia
Universitas Pembangunan Nasional Veteran	Public	Surabaya	Indonesia	Asia
Universitas Pendidikan Indonesia	Public	Bandung	Indonesia	Asia
Fatima Jinnah Women University, Rawalpindi	Public	Rawalpindi	Pakistan	Asia
Islamia University, Bahawalpur	Public	Bahawalpur	Pakistan	Asia
Lahore College for Women University, Lahore	Private	Lahore	Pakistan	Asia
Mehran University of Engineering and Technology, Jamshoro	Public	Jamshoro	Pakistan	Asia
National University of Science and Technology, Islamabad	Public	Islamabad	Pakistan	Asia
University of Agriculture, Faisalabad	Public	Faisalabad	Pakistan	Asia
University of Azad Jammu and Kashmir, Muzaffarabad	Public	Muzaffarabad	Pakistan	Asia
University of Engineer and Technology, Peshawar	Public	Peshawar	Pakistan	Asia
University of Health Sciences, Lahore	Public	Lahore	Pakistan	Asia
University of Karachi, Karachi	Public	Karachi	Pakistan	Asia
University of Punjab, Lahore	Public	Lahore	Pakistan	Asia
Cebu Institute of Tech	Private	Cebu	Philippines	Asia
De La Salle University	Private	Manila	Philippines	Asia
Don Mariano Marcos Memorial State University	Public	La Union	Philippines	Asia
Mahardikah Institute of Technology	Private	Bongao	Philippines	Asia
Palawan State University	Public	Puerto Princesa	Philippines	Asia
Tawi-Tawi Regional Agricultural College	Public	Bongao	Philippines	Asia

INSTITUTION	PUBLIC OR PRIVATE	LOCATION (CITY)	COUNTRY	REGION
Technological Institute of the Philippines	Private	Manila	Philippines	Asia
University of Santo Tomas	Private	Manila	Philippines	Asia
University of Science and Technology of Southern Philippines	Public	Cagayan de Oro	Philippines	Asia
University of the Philippines	Public	Diliman	Philippines	Asia
Western Mindanao University	Public	Zamboanga	Philippines	Asia
Can Tho University	Public	Can Tho	Vietnam	Asia
Da Nang University of Science and Technology	Public	Da Nang	Vietnam	Asia
Hai Phong University of Medicine and Pharmacy	Public	Hai Phong	Vietnam	Asia
Hanoi University of Science and Technology	Public	Hanoi	Vietnam	Asia
HCMC University	Public	Ho Chi Minh City	Vietnam	Asia
Hue University of Medicine and Pharmacy	Public	Hue	Vietnam	Asia
Industrial University of HCMC	Public	Ho Chi Minh City	Vietnam	Asia
Lac Hong University	Private	Bien Hoa	Vietnam	Asia
Thai Binh University of Medicine and Pharmacy	Public	Thai Binh	Vietnam	Asia
Thai Nguyen University of Medicine and Pharmacy	Public	Thai Nguyen	Vietnam	Asia
The Fulbright University of Vietnam	Private	Ho Chi Minh City	Vietnam	Asia
VNU Hanoi	Public	Hanoi	Vietnam	Asia
University of Banja Luka	Public	Banja Luka	Bosnia	E&E
University of Mostar	Public	Mostar	Bosnia	E&E
University of Sarajevo	Public	Sarajevo	Bosnia	E&E
University of Tuzla	Public	Tuzla	Bosnia	E&E
Agricultural University of Georgia	Private	Tbilisi	Georgia	E&E
ILIA State University	Public	Tbilisi	Georgia	E&E
New Vision University (NVU)	Private	Tbilisi	Georgia	E&E

INSTITUTION	PUBLIC OR PRIVATE	LOCATION (CITY)	COUNTRY	REGION
Tbilisi State Medical University	Public	Tbilisi	Georgia	E&E
University of Pristina (UP)	Public	Pristina	Kosovo	E&E
Academy of Music, Theatre and Plastic Arts	Public	Kishinev	Moldova	E&E
State Pedagogical University "Ion Creanga"	Public	Kishinev	Moldova	E&E
State University "Alecu Russo" from Balti	Public	Bălți	Moldova	E&E
State University of Moldova	Public	Kishinev	Moldova	E&E
Technical University of Moldova	Public	Kishinev	Moldova	E&E
Instituto Tecnológico De Santo Domingo (INTEC)	Private	Santo Domingo	Dominican Republic	LAC
Pontificia Universidad Católica Madre y Maestra	Private	Santiago de los Caballeros	Dominican Republic	LAC
Universidad Autónoma de Santo Domingo	Public	Santo Domingo	Dominican Republic	LAC
Universidad Católica Santo Domingo (UCSD)	Private	Santo Domingo	Dominican Republic	LAC
Universidad Católica Tecnológica del Cibao	Private	La Vega	Dominican Republic	LAC
Universidad Central del Este	Private	San Pedro de Macorís	Dominican Republic	LAC
Universidad Iberoamericana (UNIBE)	Private	Santo Domingo	Dominican Republic	LAC
Universidad Dominicana O&M	Private	Santo Domingo	Dominican Republic	LAC
Universidad ISA	Private	Santiago De Los Caballeros	Dominican Republic	LAC
Universidad Nacional Pedro Hneriquez Ureña	Private	Santo Domingo	Dominican Republic	LAC
Catholic University of El Salvador	Private	Santa Ana	El Salvador	LAC
Central American Technological Institute	Public	Santa Tecla	El Salvador	LAC
Don Bosco University	Private	Soyapango	El Salvador	LAC
Dr. José Matías Delgado University	Private	La Libertad	El Salvador	LAC
Francisco Gavidia University	Private	San Salvador	El Salvador	LAC
Gerardo Barrios University	Private	San Miguel	El Salvador	LAC

INSTITUTION	PUBLIC OR PRIVATE	LOCATION (CITY)	COUNTRY	REGION
José Simeón Cañas Central American University	Private	San Salvador	El Salvador	LAC
National University of El Salvador	Public	San Salvador	El Salvador	LAC
Technological University	Private	San Salvador	El Salvador	LAC
Universidad de San Carlos de Guatemala	Public	Guatemala City	Guatemala	LAC
Universidad del Valle de Guatemala	Private	Guatemala City	Guatemala	LAC
Universidad Panamericana de Guatemala	Private	Guatemala City	Guatemala	LAC
Instituto Desarrollo	Private	Asuncion	Paraguay	LAC
National Institute for Higher Education (INAES)	Public	Asuncion	Paraguay	LAC
National University of Asuncion	Public	San Lorenzo	Paraguay	LAC
National University of Canindeyu (UNICAN)	Public	Salto del Guirara	Paraguay	LAC
National University of Concepcion (UNC)	Public	Concepcion	Paraguay	LAC
National University of the East (UNE)	Public	Ciudad del Este	Paraguay	LAC
Ain Shams University	Public	Cairo	Egypt	MENA
Alexandria University	Public	Alexandria	Egypt	MENA
American University of Cairo	Private	Cairo	Egypt	MENA
Cairo University	Public	Giza	Egypt	MENA
Helwan University	Public	Helwan	Egypt	MENA
Mansoura University	Public	Mansoura City	Egypt	MENA
Modern University	Private	Cairo	Egypt	MENA
Port Said University	Public	Port Said	Egypt	MENA
South Valley University	Public	Qena City	Egypt	MENA
Zagazig University	Public	Zagazig	Egypt	MENA
American University of Beirut	Private	Beirut	Lebanon	MENA
Lebanon American University	Private	Beirut	Lebanon	MENA

INSTITUTION	PUBLIC OR PRIVATE	LOCATION (CITY)	COUNTRY	REGION
HASSAN II University	Public	Casablanca	Morocco	MENA
Specialized Institute of Applied Technology Hay Hassani I	Public	Casablanca	Morocco	MENA
UAE Tanger	Public	Tetouan to Tangier	Morocco	MENA
Université Cadi Ayyad de Marrakech, la Faculté des Sciences et Techniques	Public	Marrakesh	Morocco	MENA

ANNEX B: NATIONAL EDUCATION AGENCIES OBSERVED

REGION	COUNTRY	NATIONAL HE AGENCY	DEPARTMENT
Africa	Ethiopia	<u>Ministry of Science and Higher Education</u>	Higher Education Department
Africa	Ghana	<u>Ministry of Education</u>	Tertiary Education Division
Africa	Kenya	<u>Ministry of Education</u>	University Education and Research
Africa	Malawi	<u>Ministry of Education, Science, and Technology</u>	Directorate of Higher Education
Africa	Nigeria	<u>Federal Ministry of Education</u>	Tertiary Education
Africa	Uganda	<u>Ministry of Education and Sciences</u>	Higher Education Department
Africa	Senegal	<u>Ministry of Higher Education, Research, and Innovation</u>	
Africa	South Africa	<u>Department of Higher Education and Training</u>	
Asia	Afghanistan	<u>Ministry of Higher Education</u>	
Asia	Indonesia	<u>Ministry of Education and Culture</u>	
Asia	Pakistan	<u>Higher Education Commission</u>	
Asia	Vietnam	<u>Ministry of Education and Training</u>	Higher Education Department
Asia	Philippines	<u>Commission on Higher Education</u>	
E&E	Georgia	<u>Ministry of Education and Science</u>	
E&E	Kosovo	<u>Ministry of Education, Science and Technology</u>	High Education Department (HED)
E&E	Bosnia	<u>Ministry of Civil Affairs</u>	
E&E	Moldova	<u>Ministry of Education, Culture, and Research</u>	
LAC	Dominican Republic	<u>Ministerio de Educacion Superior, Ciencias y Tecnologia (MESCYT) and Consejo Nacional de Educacion Superior, Ciencias y Tecnologia (CONESCYT)</u>	
LAC	El Salvador	<u>Ministerio de Educacion</u>	
LAC	Guatemala	USAC is the only public HEI and is bound by Constitution; Private HEIs, include Consejo de la Enseñanza Privada Superior (CEPS)	
LAC	Paraguay	<u>Consejo Nacional de Educacion Superior</u>	

REGION	COUNTRY	NATIONAL HE AGENCY	DEPARTMENT
MENA	Morocco	<u>Ministry of National Education and Vocational Training</u>	
MENA	Egypt	<u>Ministry of Education and Scientific Research</u>	
MENA	Lebanon	<u>Ministry of Education and Higher Education</u>	

ANNEX C: INTERNATIONAL PORTALS/DATA SOURCES

WEB RESOURCE	ANNOTATION
<u>UNESCO</u>	Tracks affected learners across all levels of education and separated by gender globally
<u>OECD</u>	Comprehensive list of indicators and initiatives undertaken by national governments to understand local healthcare, economic, financial, and social responses to crisis
<u>ICNL</u>	Tracks responses by national governments that affect civil liberties and potential have adverse effects on inclusive response potential
<u>ISC</u>	Maps reopening timelines for global HEIs and links to corresponding publications
<u>AUF</u>	Tracks international response plan by IGO with a focus on the Francophone world, resources available to nations in network and comprehensive list of financed innovation and research projects
<u>Johns Hopkins University of Medicine</u>	Dashboard tracks severity and infectivity of the COVID-19 virus globally
<u>Congressional Research Service</u>	In-depth research reports on a variety of topics, including the socio-and geo-political elements of selected regions and countries
<u>World Bank</u>	Resources and guidance for the transition to distance learning and case studies of successful integrations of EdTech into national education
<u>IAU</u>	Links to resources to track higher education specific impacts and reporting

ANNEX D: GLOBAL ASSESSMENT GUIDELINES

Assessment Criteria for Global Trends of COVID-19 Responses of Higher Education Systems and Institutions

Purpose: This document seeks to define criteria/desired outcomes for assessing actions taken by Higher Education (HE) systems and institutions in response to COVID-19. The criteria will draw from guidelines and recommendations for COVID-19 mitigation from USAID, UNESCO, INEE, and other global education actors as well as relevant literature. This document will inform the global analysis section of the Higher Education/COVID-19 Landscape Analysis.

Proposed Criteria: Trend analysis of challenges and opportunities will be guided by the three essential functions of HE systems, as identified within the USAID Higher Education Programmatic Framework (Figure 5): 1) provide quality and relevant education and workforce training; 2) advance knowledge and research; and 3) engage and strengthen networks and communities with a strong focus on creating HE systems that are robust and resilient, particularly in the face of crisis. The four priority characteristics of 1) equity and inclusion; 2) sustainability; 3) data and evidence; and 4) local ownership will be considered for the identification of challenges and opportunities.

FIGURE 1. USAID HIGHER EDUCATION PROGRAMMATIC FRAMEWORK

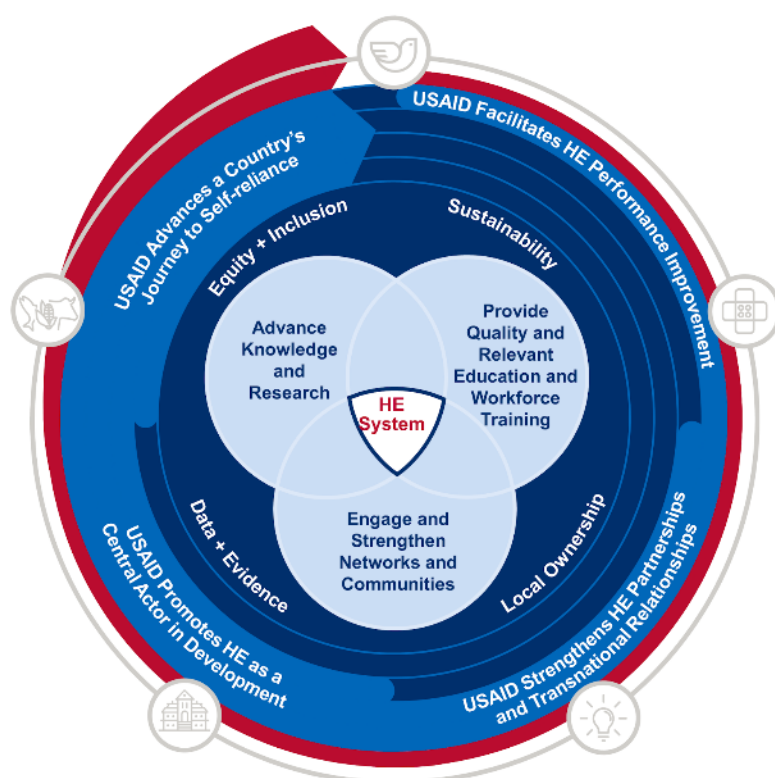
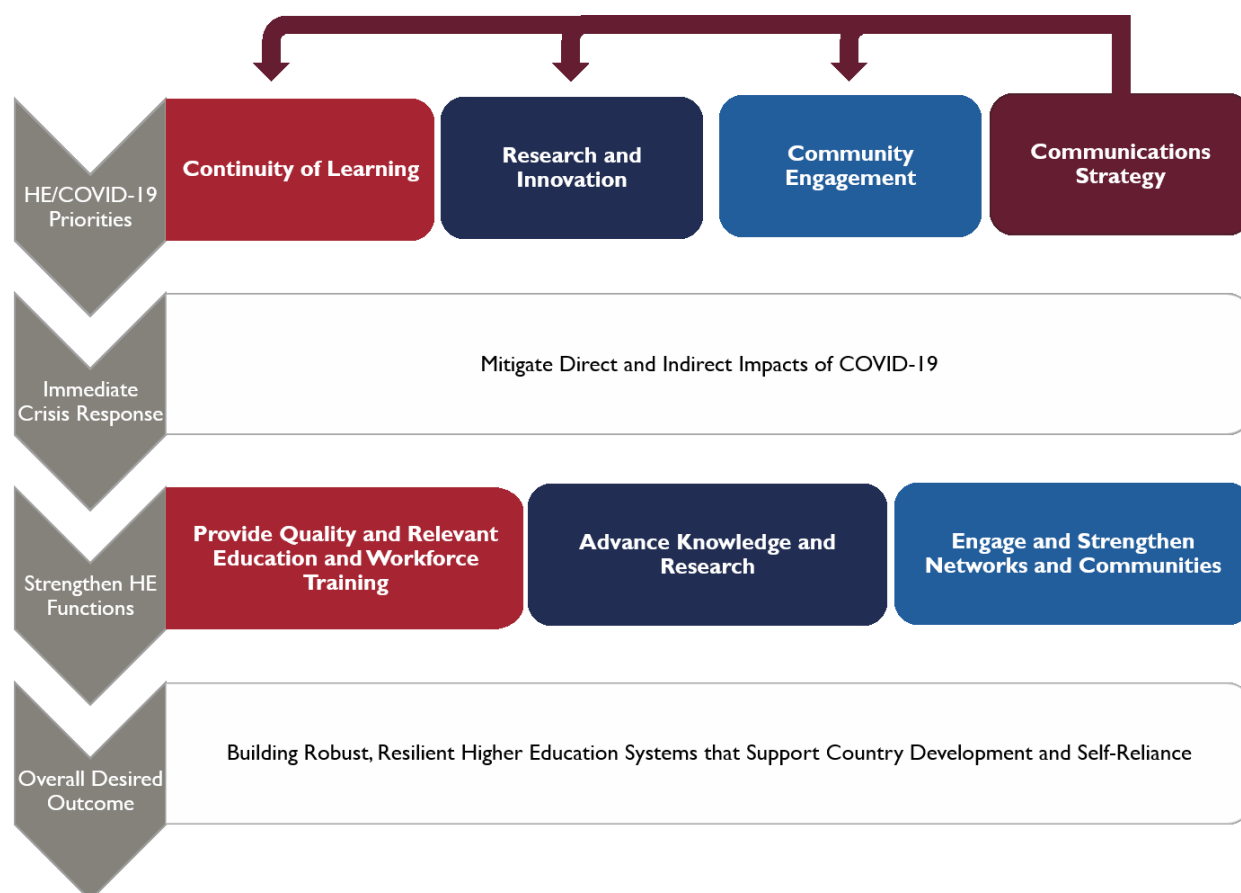


Figure 1 illustrates the framework aligning the Programmatic Framework and the four key interest areas of the landscape map (continuity of learning, research and innovation, community engagement, and communications strategy). Trend analysis will generally **consider the challenges and opportunities for developing the capacity of HE systems to deliver the complementary function of that trend's pillar** (i.e. color-coded function). Analysis of trends observed under one pillar may also be guided by complementary functions of other pillars. For example, an opportunity for a trend of R&I may

discuss opportunities for private-sector collaboration to produce R&I as well as provide practical place-based learning opportunities. Trends of the communications strategy pillar is to be assessed based on the five critical features defined later in the document and the trends' perceived implications for the strengthening of the other three pillars.

FIGURE 2. FRAMEWORK FOR GLOBAL ANALYSIS



General questions to guide global analysis:

- Trends
 - What are the trends?
 - How do they differ regionally?
- Challenges
 - Why might those trends have materialized?
 - Considering those causes, what are the challenges to improving or expanding these trends considering the three layers of outcomes?
 - How do these challenges differ by region, within regions, etc.?

- Opportunities

- How might USAID, HEIs, researchers, etc. support the improvement or expansion of this trend?
- What are the opportunities for strengthening the three functions of HE systems?
- What are the opportunities for building resilience within the HE system?
- What are the opportunities for strengthening equity and inclusion, sustainability, data and evidence, and local ownership within the HE system?
- How can these opportunities be tied to USAID areas of engagement (partnership, scholarship, institutional capacity strengthening, workforce development, policy reform)?

Where COVID-19-specific guidance from education and development actors were available, frameworks for the key components of each pillar have been defined by drawing relevant recommendations. More detailed guidance for considering each pillar are provided in the sections below.

AREA	GLOBAL TREND	CHALLENGES	OPPORTUNITIES
CONTINUITY OF LEARNING	Education agencies often focused on designing plans and developing resources for the basic and secondary level, leaving HEIs largely responsible for the crafting of their own plans.	Institutional autonomy is important given the range of specialized institutions within the HE sector, but lack of coordination may have overburdened HEIs to fully tailor individualized just-in-time plans without much direction from the government.	Develop contingency plans and distance education competency within HEIs Stronger emphasis on distance education competency within teachers colleges Research effective vertical and horizontal governance structures for HE during crises
RESEARCH AND INNOVATION	Many HEIs redirected existing resources and/or mobilized resources from the private/public sector to innovate and provide the local healthcare system with medical devices manufactured at HEIs.	HEIs in low-income/early industrial contexts may lack resources within the institution with few alternative sources of funding or collaboration from the public or private sector.	Investing in capital and skills acquisition for R&I Facilitating university partnerships and consortiums Establishing private sector collaborations to produce R&I as well as provide practical place-based learning opportunities
COMMUNITY ENGAGEMENT	HEIs supported the local community by providing nutritional kits and sharing information about nutritional programs and social insurance programs. Community engagement was generally informal and not through	Donations to the community were often crowd-sourced from the community. Communities that overall are under-resourced may be unable to provide for themselves to the same extent as other HEIs.	Developing service learning opportunities and a culture of engaged scholarship to address local issues Studying the role of HEIs in disseminating information and increasing uptake of

AREA	GLOBAL TREND	CHALLENGES	OPPORTUNITIES
	established partnerships with for example NGOs.		social programs especially during crises
COMMUNICATIONS STRATEGIES	Not all government agencies and HEIs utilized websites and/or social media frequently or in a coordinated manner.	Lack of resources to hire and/or train communications specialists Lack of resources to hire and/or train an ICT specialist	Support development of communications and ICT capacity of HEIs/government agencies to craft effective communications strategies and website design

Continuity of Learning

Continuity of Learning will be assessed on governments' and HEIs' ability to provide a rapid, comprehensive, inclusive, and forward-looking response to the COVID-19 pandemic. The global analysis will discuss challenges of HE systems for the delivery of these components and identify opportunities for USAID engagement.

COMPONENTS OF A COMPREHENSIVE CONTINUITY OF LEARNING APPROACH	RAPID PLANNING AND CONTINUOUS MANAGEMENT			
	Provision and expansion of digital infrastructure and distance education toolkit	Continuous holistic support of all learners, educators, and faculty	Following public health guidance to ensure safe, expedient, and sustainable school reopenings	Reducing barriers to entry to the workforce
	INCLUSION & EQUITY			
DESIRED SHORT-/MEDIUM-TERM OUTCOMES	Provide Quality and Relevant Education and Workforce Training Ensuring learning outcomes to build human capital (quality assurance, retention/completion rates, skills development to ensure an adequately skilled workforce)		Creating robust, resilient HE systems (to prevent future crises from interrupting learning at the same magnitude)	

Key components:

- **Rapid Planning and Continuous Management** (UNESCO, Five Steps; USAID, Return to Learning)
 - Activate an emergency group to carry out the below tasks
 - Engaging stakeholders to inform key decisions
 - Mobilizing financial and human resources
- Continuous monitoring and evaluation of state of public health, education outcomes, coverage of distance education, etc. to inform actions
 - Long-term strategic planning to build resilience
- **Provision and expansion of digital infrastructure and toolkit** (UNHCR, How to ensure everyone can continue learning amid the coronavirus situation)
 - Invest in digital infrastructure
 - Rapid landscape analysis of available resources to deploy (MOOCs, edtech tools, etc.)
 - Rapid response to increase availability of resources
- Continuous holistic support for all learners, educators, and faculty to reduce barriers to learning (USAID, Return to Learning; ECCN, Learning Must Go On; UNESCO, Five Steps)
 - Act (e.g. review/revise policy, secure and/or adjust funding, develop partnerships with NGOs, CSOs, private sector, public sector, etc.) to provide:
 - Educational support e.g. trainings on digital literacy, distance teaching/learning
 - Psychosocial support
 - Physical/nutritional support
 - Financial support
- Public health aspect to ensure the speedy reopening of institutions (USAID, Return to Learning; UNESCO, Five Steps)
 - Coordinate with/follow guidance of health agencies to craft guidelines and criteria-based phased plans for reopening
 - Provide hygiene/health guidance and information
- Inclusion and equity for at-risk learners (ECCN, Learning Must Go On)

- Students with disabilities
- Students in areas of crisis and conflict
- Students of marginalized groups e.g. women, ethnic minorities
- Reducing barriers to entering the workforce (UNESCO, TVET and Labour Markets)
 - Reorienting TVET programming to develop skills that will be needed during and post-pandemic
 - Accelerated or adjusted credentialing requirements to meet workforce needs and prevent prolonged economic hardship

Research and Innovation

TYPE OF R&I ENGAGEMENT	HEALTHCARE/MEDICAL DEVICES	NON-HEALTH CARE	TECHNOLOGICAL ADVANCEMENT
DESIRED OUTCOME	Advance Knowledge and Research Immediately contribute to COVID-19 response and knowledge dissemination Begin research on COVID-19 and myriad impacts Develop/strengthen research capacity within the system		

Community Engagement

TYPE OF ENGAGEMENT	PUBLIC HEALTH	NON-PUBLIC HEALTH
DESIRED OUTCOMES	Engage and Strengthen Networks and Communities Protecting communities from the direct and indirect impacts of COVID-19 Establishing/strengthening community engagement leads to new opportunities for service learning and HEIs as local development actors	

- Public health
 - Dissemination of health and hygiene information
 - Provision of items, facilities, human resources
 - Technical expertise to support local healthcare/public health response
 - COVID-19 testing
 - COVID-19 tracking

- Technical assistance to train lab technicians
- Non-Public Health (UN, COVID-19 and Higher Ed)
 - Assessment of community nutritional needs
 - Providing food supplies
 - Dissemination of information regarding non-public health matters e.g. social assistance programs to protect the community

Communications Strategies

CRITICAL FEATURES OF A COMMUNICATIONS STRATEGY	MECHANISM	FREQUENCY	ACCESSIBILITY	ENGAGEMENT	SUBSTANCE
DESIRED OUTCOMES FOR COVID-19 MITIGATION	Ensure Continuity of Learning	Promote Research and Innovation		Support Community Public Health and Social Protection	

- **Mechanism:** Are the communication channels effectively reaching intended audiences? (UNESCO, Five Steps)
- **Frequency:** Are relevant communications frequent? (UNESCO, Five Steps)
- **Accessibility:** Is the information easily accessible and inclusive for the most relevant stakeholders? (UNESCO, Five Steps)
 - Proxy questions: Was it easy for us to find this information? Is there a dedicated website for COVID-19 related information?
- **Engagement:** Are relevant stakeholders being engaged for input/participation in decision making, research initiatives, etc? (USAID, Return to Learning)
- **Substance:** (UNESCO, Five Steps)
 - Continuity of Learning: Are decisions about the education system/institution in response to COVID-19 being communicated?
 - Public Health/Social Protection: Are updates about the public health crisis at the most relevant scale being communicated? Is guidance on health and hygiene being shared?
 - Research and Innovation: Are R&I initiatives/outcomes being communicated and disseminated?

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ANNEX E: COMMUNICATIONS AND ACTIONS RESEARCH DOCUMENT

To view the Communications and Actions Research Document, please go to:

<https://www.edu-links.org/resources/higher-education-response-covid-19-landscape-map-usaid-partner-countries>