

Background Paper

Distance Education in Emergencies



Inter-agency
Network for Education
in Emergencies

The Inter-agency Network for Education in Emergencies (INEE) is a global open network of members who are working together within a humanitarian and development framework to ensure that all individuals have the right to a quality, safe, relevant, and equitable education. INEE's work is founded on the fundamental right to education. For more information and to join INEE, visit inee.org.

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Yedidiya and Semretemedhin, attending classes via Radio which is one of the government's initiatives to support studying at home due to closed schools across Ethiopia. © UNICEFEthiopia/2021/NahomTsfaye

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FOREWORD

I was born as a refugee. I attended UNRWA (The United Nations Relief and Works Agency for Palestinian Refugees) Schools until I was 15 years old. Most of my life has been spent either living in conflict-affected areas or working on activities related to the people living in such conditions. When INEE asked if I'd be interested in writing the forward to the paper you are now reading—sharing useful knowledge and resources to ensure better education for people living in crisis—my answer was a definite yes because I know first-hand what education means to the children and young people living in such conditions: it is life-saving and life-sustaining.

It is well documented that crises and emergencies, especially at the local level, exacerbate pre-existing learning inequalities and have a profound impact on the most vulnerable and marginalized groups, including children and youth living in poverty, indigenous communities, people with disabilities, and women (where girls are 2.5 times more likely to drop out of school than boys in such contexts). According to estimates from UNESCO, UNICEF, and the Global Partnership for Education (GPE), the number of out-of-school primary and secondary school-age children and young people living in crisis-affected areas was 127-130 million in 2019. With COVID-19 severely impacting the education system globally (i.e., school closures, lack of effective distance/online education policies, weak technical infrastructure, limited knowledge / capacity of educators to embrace alternative learning approaches, and students/caregivers' challenges to adapt), the number of learners out-of-school or without adequate access to education opportunities around the world has risen to 1.3 billion at its height.

Access to decent learning conditions and opportunities during crises is crucial not only to equip learners with relevant knowledge and skills to realize their full potential, but also to prevent increased vulnerabilities to exploitation and violence, including human trafficking, early marriage, unsafe work conditions and engagement in criminal and other dangerous activities.

Distance Education is one of the important modalities and an integral part of education in emergencies (EiE). Distance education initiatives can enhance accessibility and create enabling conditions for effective and enjoyable learning journeys to a diversity of learners/learning contexts. Such initiatives must conform to quality education requirements, be holistic, inclusive and gender-sensitive, and informed by locally-aware and engaged stakeholders.

Since its inception nearly two decades ago, INEE has pioneered important research and professional efforts, examining the challenges and opportunities facing key stakeholders (e.g., educators, learners, caregivers, policymakers, donors, and community members) in the EiE domain. In this background paper, INEE addresses head-on an important challenge: what are the required considerations to provide quality, inclusive, gender-sensitive and principles-based distance education in emergencies?

Along with INEE's Distance Education Database and the Minimum Standards, this paper presents useful resources, tools, best practices and considerations for key play-

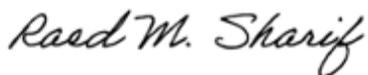
ers engaged in the planning, implementation, monitoring and evaluation of distance education initiatives. It also lists steps required to ensure quality interventions based on principles, minimum standards, research evidence, experiences shared by expert consultants, and recommendations from practitioners.

The paper offers very timely advice complemented by evidence-based recommendations and frameworks for best practices and tackling practical difficulties related to three fundamental factors affecting the effectiveness and sustainability of distance education efforts: teacher professional development, technology for education, and enabling policies for distance education in emergencies.

Teachers are the cornerstone of all types and modalities of online and offline education. Their professional and personal wellbeing is crucial for ensuring quality education. The authors of this paper conducted an extensive literature review of the challenges and opportunities for teacher professional development related to distance education in EiE, and assembled an impressive list of recommendations and best practices. Depending on the country or region, technology-facilitated learning utilizes a wide range of technical tools and approaches. Whether it is a low- or high-tech, on- or off-line solution, the paper recommends that a thorough and careful assessment of the most appropriate and feasible modalities and tools be conducted. The paper emphasizes the need for modular and easy to use solutions, as well as for EdTech content to be contextualized, adapted to learners' needs and languages and geared towards continuity.

While acknowledging the general lack of distance education or EdTech policy for countries' citizens, which is only exacerbated for refugees, the paper provides the reader with evidence collected from researchers, practitioners and policy makers about how to create and evaluate effective, inclusive and sustainable policies. This should be a collaborative effort between educators and learners, decision-makers at the institutional and national levels, those within the international community, as well as technology innovators.

No distance education initiative or modality is effective in all contexts and over time, or ideal to provide all necessary knowledge and skills. Therefore, the discussions, resources and guidance presented in this background paper are instrumental to ensuring quality, effective, inclusive, and equitable forms of distance education to meet context-specific needs.

A handwritten signature in black ink that reads "Raed M. Sharif". The signature is written in a cursive, flowing style.

Raed M. Sharif, Ph.D.

Researcher, Educator and Practitioner

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ACRONYMS AND ABBREVIATIONS

AKF	—————	Aga Khan Foundation
BMZ	—————	Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung (in English, Federal Ministry of Economic Cooperation and Development)
CAMFED	—————	The Campaign for Female Education
DE	—————	Distance Education
DERG	—————	Distance Education Reference Group
EiE	—————	Education in Emergencies
GIZ	—————	Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH (in English, German Society for International Cooperation)
ICT	—————	Information and Communications Technology
IDP	—————	Internally Displaced Person
INEE	—————	Inter-agency Network for Education in Emergencies
INGO	—————	International Non-Governmental Organization
ISDR	—————	International Strategy for Disaster Reduction
L&D	—————	Learning and development
MoE	—————	Ministry of Education
MOOC	—————	Massive Open Online Courses
NGO	—————	Non-Governmental Organizations
OCHA	—————	Office for the Coordination of Humanitarian Affairs
PC	—————	Personal Computer
PITB	—————	Punjab Information and Technology Board
SDG	—————	Sustainable Development Goal
SIM	—————	Subscriber Identity Module
SMS	—————	Short Message Service
THP Foundation	-	The Hunger Project Foundation
UID	—————	Unique Identifier
UN DHA	—————	United Nations Department of Humanitarian Affairs
UNESCO	—————	United Nations Educational, Scientific, and Cultural Organization
UNHCR	—————	United Nations High Commissioner for Refugees
USAID	—————	United States Agency for International Development



INTRODUCTION

This Background Paper covers specific challenges, lessons learned, practices, and actions to consider when aiming to provide quality, principles-based distance education (DE) in emergencies. The paper considers inclusion and equity to be key guiding principles for education in general and calls for their application across all education modalities, including DE.

This paper presents

- useful ideas and actions for planning, offering, or monitoring and evaluating DE in emergencies, accompanied by examples of possible adaptations of key actions in various situations to account for the wide range of contexts in which emergencies occur
- background information and definitions to enhance clarity for all readers; and
- advice on three focus areas: Teacher Professional Development in DE, technology for education, and enabling policies for DE in emergencies; this advice is complemented by evidence-based recommendations for tackling practical difficulties

METHODOLOGY ADOPTED TO DEVELOP THIS BACKGROUND PAPER

Altamont Group, working in consultation with the Inter-agency Network for Education in Emergencies (INEE) Distance Education Reference Group (DERG), adopted a participatory and collaborative process that allowed, to the extent possible, DERG members' involvement in collecting resources in the development phases of the paper. The Altamont Group team used multiple qualitative methods: an initial reflection workshop with DERG members; a mapping of nearly 341 resources; a literature review of 70 documents; and 20 semi-structured interviews with key experts, including several DERG members.

OBJECTIVES OF THIS BACKGROUND PAPER

The objectives of this paper are as follows:

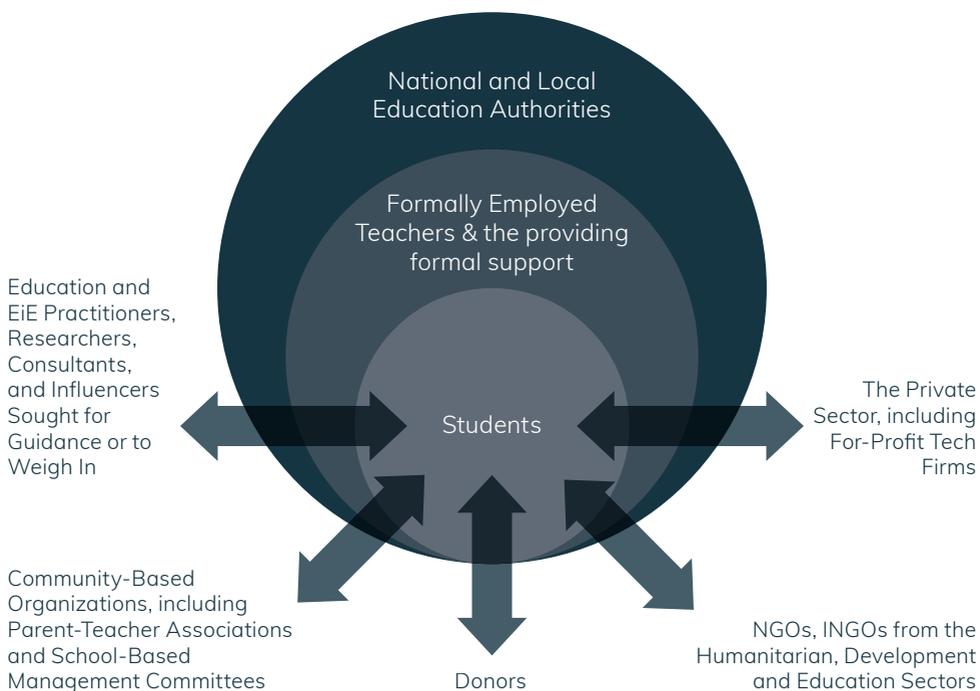
- Identify major challenges, opportunities, lessons learned, and the most frequently applied DE practices
- Present quick guidance tips on three focus areas of DE strategies: Teacher Professional Development, technology for education, and enabling policies for DE in emergencies
- Present a mapping of existing resources on DE in emergencies

WHO IS THIS BACKGROUND PAPER FOR?

The audience of this paper is all stakeholders of DE in emergencies, including:

- Education authorities at the national and local levels
- National and local NGOs
- Community-based organizations, including parent-teacher associations and school-based management committees, which are also called school management committees
- Formally employed teachers and volunteers
- Education institution administrators and staff members
- Education in emergencies practitioners, such as INGOs that provide DE in emergencies and their staff members
- Researchers
- Donors
- Engineers of education technology
- The private sector

Figure 1: Actors in the Distance Education in Emergencies Ecosystem, Drawn from This Research



STRUCTURE OF THIS BACKGROUND PAPER

This paper is composed of an overview, followed by strategies to ensure that quality, safe, relevant, and equitable DE is provided as required to all individuals affected by emergencies. These strategies are in keeping with the three focus areas: Teacher Professional Development, technology for education, and enabling policies for DE in emergencies. Each focus area is addressed in a separate section.

The section for each focus area concludes with a checklist of key things to consider in the five-phase process cycle: (1) readiness, (2) planning, (3) implementation, (4) the transition to blended or face-to-face learning, and (5) monitoring and evaluation. This paper recommends that readers take time to reflect on all five phases, from the readiness of all actors involved in the planning to the implementation, including an integrated transitional phase, and on to incorporating monitoring and evaluation into the other phases mentioned. Taking time to reflect increases the ability to ensure that quality DE in emergencies is provided to all who are affected by emergencies, especially the most vulnerable learners.

This paper is accompanied by annexes which provide definitions of key terms used in DE; resources to help structure a DE intervention and tips specifically for DE teachers.



1. OVERVIEW

1.1 EDUCATION IN EMERGENCIES

DE is an integral part of education in emergencies (EiE) and one of its modalities. It is offered using varied approaches, as suggested by the definition in Box 1.

UNESCO (1997) defines DE as an “educational process and system in which all or a significant proportion of the teaching is carried out by someone, or something removed in space and time from the learner. DE requires structured planning, well-designed courses, special instructional techniques, and methods of communication with specific delivery systems ranging from print to internet and mobile based.”¹

1 This paper uses the most updated DE definition as developed by INEE which is presented in Box 1. Interested readers may consult the [EiE Glossary](#) for this definition as well as other terms and definitions.

EiE is quality education delivered in specific emergency contexts to the learners affected by the emergencies. INEE (n.d.) further explains that EiE refers to quality learning opportunities for people of all ages in situations of crisis, including early childhood development, primary, secondary, non-formal, technical, vocational, higher, and adult education. EiE also provides physical, psychosocial, and cognitive protection that can sustain and save lives. Common crisis situations where EiE is essential include but are not limited to conflicts, situations of violence, forced displacement, natural disasters, and public health emergencies. Education in emergencies is a wider concept than emergency education response, which is an essential part of EiE (INEE, 2018).

Box 1: Definition of Distance Education

INEE defines “distance education” as an umbrella term encompassing a variety of education approaches that is applied when teachers and learners are separated by space and time, or both. DE includes high-, low-, no-tech approaches and solutions; and formal and non-formal learning at multiple levels (pre-primary, primary, secondary, post-secondary, and all tertiary levels, including technical and vocational education and training). Terms like “distance learning,” “online learning,” “remote learning,” and “e-learning,” all of which identify technology-enabled education approaches that require digital devices and internet connectivity, are a critical subset of the wider DE arena.

Box 2: Definition of Education Response

Education response is the provision of education services to meet people’s need for and right to education during an emergency and on through recovery.

EiE refers to providing quality learning opportunities for all ages in a crisis situation for as long as the crisis continues to affect those individuals. Studies show that the full life cycle of a crisis currently averages 20 years and that the longer the children affected are out of school, the more difficult it is for them to return to or continue their education (UNHCR, 2016a; UNHCR, 2016b, in Williams & Corwith, 2021).

The rights of children and young people are not suspended during an emergency, including the right to education. Quality education protects students’ cognitive development and supports their psychosocial well-being. In times of crisis, it also gives children a sense of hope. [UNESCO-SDG Resources for Educators: Quality Education \(2021\)](#) states that quality education specifically entails such issues as appropriate skills development, gender parity, provision of a relevant school infrastructure and teaching workforce, as well as equipment, educational materials and resources, and scholarships.

The promise of Sustainable Development Goal 4 (SDG4) (UN, 2015) — to ensure inclusive and equitable quality education for all by 2030—will not be achieved without a much greater commitment from governments, who hold the main responsibility for ensuring the right to quality and inclusive education, as well as from global and regional collaboration among all governments, civil society, the private sector, UN and other multilateral agencies to plan, prioritize, and protect education, particularly in conflict and crisis contexts (INEE, n.d.).

The specific objectives of SDG4 include providing more opportunities for technical and vocational training for youth and adults so they can get better jobs; ending unequal educational opportunities for men and women; providing the right education for children with disabilities, indigenous people, and victims of conflict; improving school facilities to provide a safe, positive environment for all learners; increasing the number of trained and qualified teachers; and promoting education for sustainable development (UNESCO, n.d.).

The INEE Minimum Standards (INEE, 2010) affirm that EiE addresses several life-saving and life-sustaining objectives, including providing a safe learning environment. Morris and Farrell (2020) argue that EiE offers benefits that are critical to the well-being of children, youth, and educators. Other benefits of EiE recognized in practice include:

- helping learners regain a sense of normality through the structured and supported activities of education;
- helping learners maintain psychosocial stability;
- inspiring hope for a better future;
- promoting learners' strong awareness of gender equality, diversity, acceptance, potential risks and mitigation measures, and/or ways for learners to seek support as needed; and
- building life skills that strengthen learners' coping strategies, support conflict resolution and peacebuilding, and facilitate learners' future employment.

The paper specifically stresses the opportunities EiE offers to protect learners, help them maintain or improve their mental health and general well-being, and strengthen the commitment to improve gender equality.

In accordance with the recognized benefits of quality education, the UN Secretary General's Global Education First Initiative (2015) states that quality education reduces poverty, fosters economic prosperity, changes attitudes to empower women, improves health, and reduces infant mortality through girls' education. It states further that, to achieve quality education, "we must train, equip, value and support quality teachers, improve data collection, set the right policy priorities, create curricula for an equitable world, transform classrooms into collaborative community settings, provide sufficient engaging learning material, and increase global investment in education" (Global Education First Initiative, 2015, Video, 1:29)

1.2 TYPES OF DISTANCE EDUCATION

Miao et al. (2020) note the following types of DE:

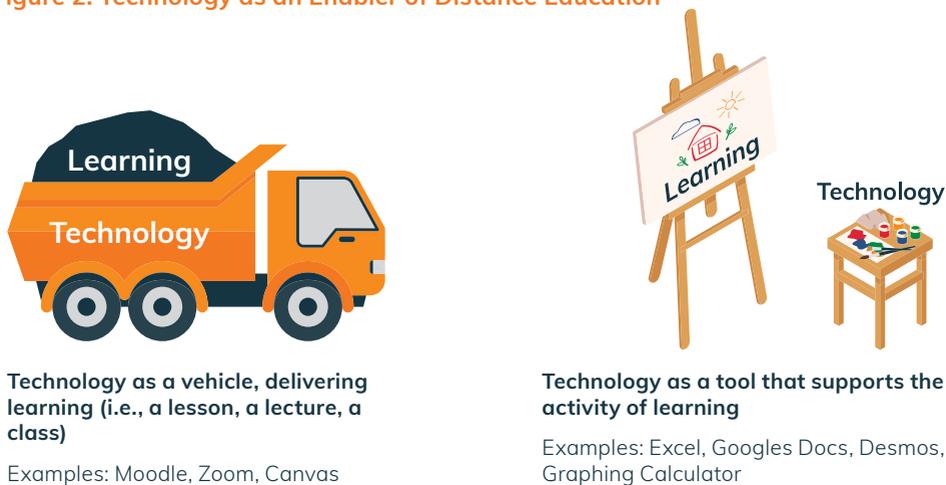
In a broad sense, distance learning is often synonymous with online learning, e-learning, correspondence education, remote studies, flexible learning, and massive open online courses (MOOCs). Common features of distance learning are spatial and/or temporal separation, and the use of media and technology to enable communication and exchange during the learning process. This may be achieved through print-based learning, one-way broadcasting (TV and radio programs), or the web (social media and learning platforms). (p. 11)

Dreesen et al. (2020, p. 10) show that, in response to school closures due to COVID-19, many governments have rolled out multiple learning modalities to expand their reach, including those that require no commonly available technology, especially to the most disadvantaged for children. They note that 68% of the 127 countries for which data are available are using some combination of digital and non-digital remote education delivery (TV, radio, and take-home materials). Even a low-tech delivery mode, such as TV, is used by 75% of these countries. This includes making TV lessons accessible to children with hearing disabilities by using sign language (Morocco, Uzbekistan). However, both TV and radio (used by 58% of the countries) require electricity. To address the lack of electricity in many areas, 49% of the countries are also providing take-home learning materials. Refugee children in Jordan are receiving packages of learning materials, and in Jamaica, learn-and-play kits are being delivered to children living in COVID quarantine zones.

Some countries have identified the need to support both caregivers and teachers in the delivery of learning, thus they have invested in developing support for the delivery of remote learning (UNESCO et al., 2021; Dreesen et al., 2020).

Mary Burns (INEE DERG), an expert consulted during the development of this paper, considers one particular investment crucial to providing effective DE. In her interview, Burns described technology as an enabler of online DE in two distinct yet often complementary ways (personal communication, November 5, 2021). The two are shown in Figure 2.

Figure 2: Technology as an Enabler of Distance Education



Using a dump truck effectively requires knowledge of its operation; using technology to deliver learning requires the same. However, education delivery means only that the learning modality has arrived. To turn this into an activity requires understanding the proper function, use, and application of the technology, which makes it more comparable to a tool, such as a paintbrush. Like a brush used for painting, a tool used to support learning can be used in different settings with different effects; the skill of the user is what determines whether the outcome is desirable, effective, and/or beneficial.

1.3 THE GLOBAL SHIFT TO DISTANCE EDUCATION IN EMERGENCIES

At the peak of the COVID-19 crisis, 190 countries (IREX, n.d., p. xii) had closed schools and classrooms.² The crisis challenged formal and non-formal institutions to modify learning calendars, curricula, and lesson plans, as well as the modalities through which teaching and learning take place on a scale never before seen.

Many governments responded swiftly to provide remote learning to children and young people while schools were closed, with at least one modality per education level. Television and radio were the most popular DE modalities among low-income countries, while online platforms were most popular among high-income countries. However, providing DE solutions did not automatically ensure that learners used them.

The potential usage of DE solutions by learners was linked as well to the age of learners and the available support of caregivers, highlighting that it is critical DE solutions do not overlook the youngest children and that they engage caregivers in facilitating children's learning at home, especially those at the pre-primary level (Nugroho et al., 2020, in UNESCO et al., 2021).

One finding in UNESCO et al. (2021) is that governments faced numerous challenges as they transitioned to distance learning at the onset of COVID-19, such as limited institutional capacity to support teachers, poor access to remote learning among vulnerable populations, and a lack of coherent policies and funds to support DE modalities.

Morris and Farrell (2020) state that, with onset of the COVID-19 pandemic, learning that had occurred in person had to take place through distance learning. Government mandates to stay at home and maintain physical distance rapidly shifted DE globally from being an education alternative solution to being the only solution for the provision of education.

Williams and Corwith (2021) note in their research findings that, despite the preparedness of the education institution they studied and despite its adoption of a hybrid model of education prior to Covid-19, issues remained with this institution readiness, including readiness to maintain academic rigor and attend to learners' social-emotional well-being during the acute emergency stage of remote teaching. William and Corwith affirm that, as society continues to adapt to virtual learning during times of crisis, these lessons should be considered by other school administrators as relevant.

Due to ongoing conflicts, 13 million children and youth in the Middle East-North Africa (MENA) region were already out of school due to ongoing conflicts. This situation became more extreme and even more challenging during COVID-19, which affected more than 100 million learners across the region (UNESCO-Beirut, 2020).

In Jordan, for example, universities were required to inform the Ministry of Higher Education and Research of the number of courses they converted to online media and the number of students who logged on to their online learning platforms (Hala, 2020, in Crawford et al., 2020). The ministry prepared a platform for the digitalization of the university curriculum. However, only a limited number of university classes moved online, due to Jordanian universities' delays in transitioning to online modalities. Despite Jordan being considered the best-equipped country in the MENA region for this transition (Crawford et al., 2020), it was difficult for many students, who were used to conventional classrooms, to learn online, which led to a short-term decline in learning quality.

² <https://covid19.uis.unesco.org/global-monitoring-school-closures-covid19/>

Faek and El-Galil (2020) recorded how the professors and students they interviewed who were outside the elite private university system considered themselves unprepared for online education. They said they considered online education ineffectual

The reality is that at many institutions and in many MENA countries, the transition to online learning is shaky at best. Even at those institutions where the transition does proceed, many students could easily be left behind, especially girls and students who do not have access to internet.

This indicates a lack of readiness at all levels for a swift shift to DE, including governments' lack of capacity to provide DE with any assurance of inclusiveness and equality; schools and universities being unprepared for a swift shift to online teaching; and the lack of readiness among learners and their caregivers to shift to online learning.

This paper offers tips for DE users in a range of emergency circumstances, including delivery modalities and other features. It also lists steps required to ensure quality interventions that are based on principles, minimum standards, research evidence, experiences shared by expert consultants, and recommendations from practitioners.

1.4 QUALITY OF DISTANCE EDUCATION IN EMERGENCIES

The quality of DE in emergencies is inferred from the Minimum Standards of quality for EiE, as stated in INEE Minimum Standards (2010a). DE in emergencies is education delivered through various channels or modalities, and it must conform to quality education requirements, which may be simplified as follows:

Education is the process of facilitating learning or the acquisition of knowledge, skills, values, beliefs and habits. Quality education specifically entails issues such as appropriate skills development, gender parity, provision of relevant school infrastructure, equipment, educational materials and resources, scholarships or teaching force. (UNESCO, n.d.)

UNESCO (2009) affirms that there is no one universally accepted definition of quality education. Most conceptual frameworks, however, do incorporate two important components: the learner's cognitive development and education's role in promoting values and attitudes for responsible citizenship and/or creative and emotional development.

The Education for All Global Monitoring Report and UNESCO (2015) reveals that the quality criteria for education have been developed over many years. The first criteria appeared with the World Declaration on Education for All, adopted in 1990, which stressed the need to provide education for all children, youth, and adults and be responsive to their needs and relevant to their lives. This infers two primary requirements for quality education: the inclusion of all learners and a responsive approach in keeping with all learners' actual needs, without exclusion or discrimination.

One major quality criterion of Education for All (1990) was to ensure universal access to primary education. Other criteria added in 2000, which considered the fundamentals of quality education to include enrollment, retention, and achievement, were based on evidence that enrollment alone does not ensure good learning results. An additional criterion added was to consider the pupil-teacher ratio a measure of progress toward pro-

viding a quality education (Education for All Global Monitoring Report & UNESCO, 2015). INEE (2010a), whose aim is to ensure the provision of quality education in emergencies, defines it as follows:

Quality education is affordable, accessible, gender-sensitive, and responds to diversity. It includes: 1) a safe and inclusive learner-friendly environment; 2) competent and well-trained teachers who are knowledgeable in the subject matter and pedagogy; 3) an appropriate context-specific curriculum that is comprehensible and culturally, linguistically, and socially relevant for the learners; 4) adequate and relevant materials for teaching and learning; 5) participatory methods of instruction and learning processes that respect the dignity of the learner; 6) appropriate class sizes and teacher-student ratios; and 7) an emphasis on recreation, play, sport, and creative activities in addition to areas such as literacy, numeracy, and life skills.

Unfortunately, there are still many gaps in efforts to offer quality EiE. These gaps affect all education modalities, including DE. These gaps include the failure to meet the inclusion criteria for quality education, as evidenced by figures from UNESCO (2020) showing that 40% of the poorest countries failed to support learners at risk during the COVID-19 crisis.

1.5 STANDARDS AND PRINCIPLES FOR DISTANCE EDUCATION IN EMERGENCIES

The [INEE Minimum Standards](#) and the [Principles for Digital Development](#) provide globally recognized and referenced guidance on EiE and on the implementation of technological approaches more broadly. The intersection of these standards and principles makes them highly relevant for this paper, in particular because they are the same for in-person and distance education. The quality criteria for education being inclusive, equitable, and participatory applies to all types of learning. Only the modalities vary, in order to accommodate different ways of engaging teachers and learners. As INEE Minimum Standards state:

- DE in emergencies should be inclusive and equitable while preserving the quality of education; ensure access for all to context-relevant, multimodal DE, including a relevant curriculum, sufficient engaging learning materials, provision of stationery items, electronic devices, and trained teachers; and address gender divides in education access.
- The processes adopted to prepare, implement, monitor, and evaluate education interventions should also be inclusive of all stakeholders, especially members of the affected community, regardless of their age, gender, ethnicity, religion, sexual orientation, disability, HIV status, or other factors (INEE Minimum Standards).

Box 3: Equal DE, with Reference to INEE Minimum Standards

Access and Learning Environment Standard 1: Equal access infers that no individual should be denied access to education and learning opportunities because of discrimination (discrimination risks include but are not limited to gender-based discrimination, language, school fees, and physical barriers, which can exclude certain groups). Programs should provide formal and non-formal educational services to protect education rights and to reduce the obstacles to accessing education.

- Children and youth should be invited to participate in decision-making and discussions in safe, secure, and welcoming environments that reinforce respect for constructive dialogue. Culturally appropriate ways to help children and youth express themselves can be used, such as art, music, and drama.

1.5.1 Distance Education and INEE Minimum Standards

The [INEE Minimum Standards for Education: Preparedness, Response, and Recovery](#) provide the global framework for delivering quality EiE. INEE Minimum Standards are organized into five domains, as follows:

1. **Foundational Standards (Coordination-Analysis-Community Participation).** These three represent the foundational standards and the minimum standards common to all domains. In addition to community participation, the focus is on ensuring that an initial assessment is conducted, followed by an appropriate response, with continued monitoring and evaluation.
2. **Access and Learning Environment.** The focus here is on intersectional links and partnerships to promote access to safe learning opportunities.
3. **Teaching and Learning.** This domain focuses on the elements that promote effective teaching and learning (i.e., curriculum, training, instruction, and assessment).
4. **Teachers and Other Education Personnel.** This domain focuses on the administration and management of personnel, including recruitment, conditions of service, support, and supervision.
5. **Education Policy.** The focus in this domain is on policy formulation, implementation, and coordination.

The [website for INEE Minimum Standards](#) features detailed guidelines for each of the 19 standards, with accompanying key actions, Background Papers, resources, and indicators. For further information, please refer to [INEE Minimum Standards Reference Tool](#).

INEE has already produced many documents to guide the implementation of the Minimum Standards. Among them is the recently issued [Technical Note on Education During the COVID-19 Pandemic](#), which provides guidance on how to apply the Minimum Standards in emergencies, especially acute ones like the COVID-19 pandemic. Although the process described in this technical note refers to the COVID-19 global emergency, it can be considered a reference for applying the recommended phases of INEE Minimum Standards in any emergency situation. The technical note suggests a five-phase process, with aligned key actions, suggested tasks, and practical resources:

1. **Take care of yourself**
2. **Coordinate your work**
3. **Analyze the context**
4. **Develop your activity plan**
5. **Review progress and quality**

This paper will therefore refer to these phases as part of a broader process of readiness, planning, implementing, monitoring, and evaluating DE in general, and in relation to the four strategic areas and/or focus areas that were prioritized for its development. Note that a reference to the related Domain and/or Standard, accompanied by additional relevant references, is provided with each strategy and/or focus area, as appropriate.

1.5.2 Principles for Digital Development: Actionable Guidance

One of the DE modalities relies on education technology to provide delivery channels. To ensure the quality of these technologies, their development and implementation processes must be guided by the set of Principles initially formulated through work led by UNICEF. These Principles have many intersections with the quality criteria for education response, especially Principle 1: Design with the user in mind, which requires a human-centered approach.

The [Principles for Digital Development](#) are the result of donors working cooperatively to identify what has emerged as most important for implementing technology-enabled programming in various sectors, including education. Importantly, the website for these Principles states, “Having evolved from a previous set of implementer precepts endorsed by over 300 organizations, these principles seek to serve as a set of living guidelines that are meant to inform, but not dictate, the design of technology-enabled development programs” (Digital Principles, 2015).

Under a section titled “Project Lifecycle,” the website also features detailed guidelines for each Principle that demonstrate how to apply them in practice. This guidance is broken down into four stages:

Stage 1: Analyze and Plan

Stage 2: Design and Develop

Stage 3: Deploy and Implement

Stage 4: Cross-Cutting: Monitoring and Evaluation

The Principles: What They Are, and What They Are Not

In a synthesis of findings from a participatory process focused on taking the Principles from paper to practice, Waugaman (2016) captured important considerations for practitioners in terms of what the Principles are and are not, as follows:

What they are

The Principles for Digital Development are nine high-level concepts that ideally should be considered before funding, designing, or implementing any technology-supported development work. They are mainly

- guidance designed to be updated over time as technology and development landscapes change;
- intended to support well-informed decision-making about technology-supported

- development work;
- the result of a concerted consultative effort to learn from success and failure in digital development;
- written in high-level language, which can lead to varying interpretations of what each Principle means;
- designed to be implemented together, as it is not impossible to implement them all simultaneously; and
- designed to serve as a heuristic approach to considering how lessons learned from digital development successes and failures can be translated into everyday practice.

This report is structured to help implementers and decision-makers grapple with how to assess tradeoffs between the Principles and where to apply limited resources.

What they are not

The Principles are not

- an edict;
- perfect;
- designed to solve all existing challenges to the fair, effective, sustainable, and secure use of technology in development projects;
- an answer to difficult questions that arise from tensions between individual principles, such as how to balance the move toward open data while protecting individual privacy and security; or
- designed to serve as a checklist.

Referring to Waugaman (2016), the table that follows offers a brief summary of each Principle in detail and includes a closer look at what each one means, what common barriers practitioners have faced in putting the Principles into practice, and recommendations for overcoming these obstacles.

The Principles and Related Guidance

Principle 1: Design with the User provides recommendations to avoid this common pitfall.	
Guidance Provided in the Principle	Projects designed without sufficient user engagement can fail, due to simple usability issues rather than a flawed project or system design.
Case Study Examples³	PROMISE, Aga Khan Foundation's (AKF) online/offline mobile phone/tablet-based program management information system for use by all
Case Study Key Takeaways	Human-centered design methodology was essential in initiating the project and in developing the platform

³ As noted in Haßler et al. (2018)

Principle 2:

Understand the Ecosystem provides recommendations for how to ensure that projects and programs are built, managed, and owned with consideration given to the local ecosystem.

Guidance Provided in the Principle

This Principle offers guidance in how to increase the relevance and sustainability of technology-supported international development and reduce duplication of effort.

Case Study Examples

CAMFED's use of mobile phones for education monitoring in Malawi and Zimbabwe

Case Study Key Takeaways

- Think carefully about data, what is needed, where the data will sit, who will collect them, who might feel bypassed if the data are being sent without first being reviewed
- Consider stakeholder willingness to collect data, and the way in which smartphones can incentivize stakeholders to do so
- Provide training on technology to be used in small groups to support those who are struggling and ensure local peer support
- Consider how to overcome language barriers, such as in Tanzania, where the questions and answer options are viewed by field users in Swahili but imported into databases in English
- Consider utility of different phone applications in communications and data collection, especially WhatsApp as a tool for communication, especially with volunteer data collectors
- Understand and respect political sensitivities

Principle 3:

Design for Scale offers ideas to consider for how to design a project for maximum impact.

Guidance Provided in the Principle

International development projects too often fail to move beyond the pilot stage or reach the anticipated scale, due to design flaws that limit the ability to scale. In some cases, scale is not a necessary criterion for success. In others, careful consideration of the necessary inputs can help projects reach their full potential.

Case Study Examples

Aga Khan Foundation's employment of a human-centered design approach at scale

Punjab Information and Technology Board's (PITB) real-time student assessments and monitoring of public schools in Punjab, Pakistan

Case Study Key Takeaways	Keeping scale capacity in mind, the first six months of the project were spent in the discovery and design/prototype phases, collaborating with local education stakeholders (students, parents, teachers, school leaders, government officials, and education donors/NGOs) from 24 government schools in six countries (Afghanistan, Tajikistan, India, Uganda, Tanzania, and Kenya)	Users affirmed that the PITB tablet-personal computer (PC) and smartphone-based systems enabled everyone from school principals to policymakers to learn from the real-time tracking of school information and use it to improve education services.
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Principle 4:

Build for Sustainability outlines considerations that can support a digital development solution or system's longevity for the intended duration.

Guidance Provided in the Principle	Too often international development projects fail to factor in the physical, human, and financial resources that will be necessary for long-term sustainability.	
Case Study Examples	PROMISE, Aga Khan Foundation's (AKF) online/offline mobile phone/tablet-based program management information system for use by all	Punjab Information and Technology Board's (PITB) real-time student assessments and monitoring of public schools in Punjab, Pakistan
Case Study Key Takeaways	Consider affordability of hardware and platform licenses and the flexibility to meet diverse needs. For PROMISE this included: a.) the affordability of the hardware (locally sourced tablets and/or smartphones); b.) the affordability of platform licenses (Salesforce user licenses); and c.) the flexibility of the app to meet the diverse needs of multiple schools across a variety of contexts	User incentives can ensure an increased lifetime for equipment offered. In the case of PITB tablets, a SIM card containing a data package and 300 free voice-calling minutes came with the tablets, allowing monitoring and evaluation staff from the ministry of education to use their devices for personal use as a bonus and incentivizing them to care for their tablets

Principle 5:

Be Data Driven provides tips to identify the sources of, and incorporate data into, project design and decision-making.

Guidance Provided in the Principle	Too often, international development projects fail to fully leverage data to support project planning and decision-making. The consequences of not sufficiently making data-driven decisions are not well understood, but they can include diluted impact and unintended outcomes.	
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Case Study Examples	Punjab Information and Technology Board's (PITB) real-time student assessments and monitoring of public schools in Punjab, Pakistan	PROMISE, Aga Khan Foundation's (AKF) online/offline mobile phone/tablet-based program management information system for use by all	CAMFED's use of mobile phones for education monitoring in Malawi and Zimbabwe	Multiple case studies
Case Study Key Takeaways	<ul style="list-style-type: none"> - Real-time data consolidation and subsequent availability is useful for decision-making - Dashboards offer ready access to data and insights for informed decision-making - Having a database of schools alongside their geographical coordinates can support infrastructure planning -The tablet platform has allowed the Government to make adjustments to its monitoring approach 	Automatic location-tagging of forms submitted via tablets offers proof monitoring staff conducted school visits, enhancing the credibility of the data itself	Providing feedback to users who submit data, such as through short message service (SMS), assures volunteers and others involved in collected data that their contribution is valuable	Data-driven processes allow for assessment of needs, implementation of teacher professional development in line with these needs, and real time evaluation of outcomes from that professional development, which is then used to refine the next round of professional development

Principle 6:

Use Open Standards, Open Data, Open Source, and Open Innovation provides a framework for considering an “open” approach to digital development.

Guidance Provided in the Principle

Too often in international development, scarce public resources are spent investing in code, tools, and innovations that are either locked away behind expensive licenses and/or are invested in the creation of unique, sector-specific solutions.

Case Study Examples

Punjab Information and Technology Board’s (PITB) real-time student assessments and monitoring of public schools in Punjab, Pakistan

Case Study Key Takeaways

Open-source technology can serve as a core strategy by leveraging mobile technologies to provide open-source platforms for real-time monitoring, on-spot assessment, and citizen feedback

Principle 7:

Reuse and Improve suggests how to avoid reinventing the wheel.

Guidance Provided in the Principle

As the use of information and communications technologies (ICT) in international development has matured, so too has the foundation of methods, standards, software, platforms, and other tools. Despite this rich base of available technologies, scarce development resources too often are spent building new tools when existing resources could have been adapted and improved.

Case Study Examples

No specific case study referenced

Case Study Key Takeaways

Good knowledge of the local ecosystem (Principle 2) can promote identification of local companies that already have local experience and may possibly provide better continuity (Principle 4) than a global company that does not have a local branch

Principle 8:

Address Privacy and Security provides a framework for considering how to protect user privacy and the security of data, devices, and tools.

Guidance Provided in the Principle

How information is collected, stored, analyzed, shared, and used has serious implications for both the populations about whom data are being transmitted and the organizations transmitting the data. Yet, as the digital development field has evolved, privacy and security often have not been considered sufficiently, if at all. The international development field needs to address these concerns more conscientiously.

Case Study Examples

CAMFED’s use of mobile phones for education monitoring in Malawi and Zimbabwe

Case Study Key Takeaways	<ul style="list-style-type: none"> - Develop and adopt a data governance model by designating levels of database access which are then ascribed to certain user groups - An emphasis should be placed on preventing harm and increasing vulnerability of data collectors and those from whom data was collected because of the significant costs of mistakes such as these. For example, youth engaged in data collection around the SDGs should not be seen as “policing” systems because this can strain relationships between them and local authorities - Despite the potential to increase motivation among data collectors by allowing them to view data in the database, and especially data they helped collect, this raises significant concerns around data security and child protection, especially when individual students and schools are recognizable
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Principle 9:
Be Collaborative suggests strategies for leveraging and contributing to broader common resources, actions, and knowledge to extend the impact of development interventions.

Guidance Provided in the Principle	This Principle brings all the others together in practice.			
Case Study Examples	AKF-UNICEF Innovations partnership to conduct a horizon scanning to determine what works in digital learning in Eastern, Southern, Western and Central Africa	CAMFED’s use of mobile phones for education monitoring in Malawi and Zimbabwe	Punjab Information and Technology Board’s (PITB) real-time student assessments and monitoring of public schools in Punjab, Pakistan	PROMISE, Aga Khan Foundation’s (AKF) online/offline mobile phone/tablet-based program management information system for use by all
Case Study Key Takeaways	Partnerships and collaboration with all concerned stakeholders can benefit each initiative while also strengthening the global community and ensuring synergies across sectors, including health, education, and economic development	Ongoing innovation and exploration of possibilities to share back data and data analysis using the functionality of smartphones should be promoted	<ul style="list-style-type: none"> - Initiating collaboration at the local level at the beginning of a project is very important - An education data tool and tech platform can facilitate and improve collaboration and sharing of information 	

1.6 SPECIFIC CHALLENGES RELATED TO THE DELIVERY OF DISTANCE EDUCATION

The major challenges in delivering DE lie in the realities of conflict and crisis and their effect on education. Research shows that there are certain common challenges in situations of emergency, such as monitoring and mitigating learning losses from school closures; the loss of instructional days; a reduction in students' learning levels or slowed progress; a lack of opportunity to examine and evaluate students' learning levels; limited institutional capacity to support teachers, students, and parents; poor access to DE for vulnerable populations; a lack of coherent and fully operational DE policies; a lack of funds to support DE; the inability to assess the effectiveness of applied remote learning at the country level; no central decision-making and a lack of consultation with other stakeholders; a lack of measures to prevent dropout; and a lack of plans for recovery (UNESCO et al., 2021).

1.6.1 Challenges Related to Online Distance Education

Multiple research studies reveal that the transition from face-to-face to online DE is very challenging, especially for the most vulnerable learners and those affected by emergencies. In this section, we categorize the challenges to DE as follows:

- **Connectivity challenges** mainly relate to the unreliability of internet connections and many students' lack of the necessary electronic devices. The transition to online learning in the wake of the COVID-19 pandemic threatens to worsen digital exclusion on an unprecedented scale. According to IREX (n.d., p. xii), this shift represents the "largest disruption of education systems in history" and currently affects as many as 1.6 billion learners in 190 countries. Other technological challenges include online safety and having access to devices but no ability to pay for data plans or connectivity.
- **Pedagogical challenges** to ensuring universal quality DE are principally associated with a lack of support and training for both teachers and students, including:
 - Lack of support to ensure engaged presence of students and communication with teachers, which is what differentiates a DE class from a correspondence course. The U.S. Department of Education and the Higher Learning Commission (2021, cited in University of California, Davis, n.d.) recently captured this differentiating factor as the "regular and substantive interaction between the students and the instructor," which DE satisfies. This definition of DE also notes that the interaction cannot be initiated primarily by the student. Rather, the teacher must initiate interaction. The University of California, Davis (n.d.) argues, for example, that simply posting recorded lectures or textual materials online, along with exams or quizzes, will not meet the requirements to categorize an online offering as DE; it will simply be considered correspondence education.
 - Insufficient support to develop the digital fluency of teachers and learners
 - Lack of facilitation and integration of regular and substantive interaction between students and teachers
 - Lack of attention to curating content from abundant online resources
 - Lack of skills related to content development, along with scarce online resources in languages other than English and scarce resources for different education levels (e.g., primary, secondary, post-secondary)

- **Social challenges** are mainly related to:
 - A lack of human interaction between teachers and students and among students
 - Difficulty assessing students' learning progress
 - Lack of an appropriate physical space to receive lessons at home, due to small, crowded living spaces
 - Lack of support from parents, who share the same small, crowded spaces
 - Parental resistance to DE

1.6.2 Challenges Related to Offline Distance Education

Notable challenges of offline DE are:

- Pedagogical materials must be in place in advance, since learners cannot be reached immediately, as they can with online DE
- Many students lack the necessary electronic devices
- The lack of a curricula adapted for DE
- A lack of printed materials, workbooks, sheets, and provision of stationery items
- The lack of the updated context-related information needed to choose the best low-tech intervention
- The lack of monitoring of learner participation and progress

A field observer affirmed that households that usually do not have electricity and/or internet may also face other challenges to accessing DE, such as parents and community members who lack literacy, numeracy, and academic skills, and who do not have the positive perception of education that is needed to support effective distance learning (A. Oswald, Education Specialist at Norwegian Refugee Council, INEE DERG member personal communication, January 27, 2022).

In some contexts, the security of teachers, learners, and their communities is at risk, which makes the implementation and monitoring of DE rather challenging. This was the case, for example, in the hinterlands of the Philippines, where “teachers cannot reach some areas, some teachers are afraid because there have been murders, and/or violence against teachers and so they are in need of protection themselves” (A. Frago, Plan International, personal communication, November 9, 2021).

Thus, in addition to the above gaps, DE in emergencies also must deal with the many challenges faced by learners affected by crisis, including difficult living conditions and restrictive cultural norms.

1.7 OPPORTUNITIES FOR DISTANCE EDUCATION IN EMERGENCIES

While there are many significant challenges to DE in emergencies, opportunities for global collaboration have emerged, including an initiative announced in September 2021 by Stefania Giannini, Assistant Director-General for Education of UNESCO. UNESCO and the advisory group members in this regard aim to launch the Global Declaration on Connectivity for Education in 2022.

In addition, experience of NGOs and UN agencies during the COVID-19 response enabled them to raise community awareness about the benefits, success factors, and support needed for DE.

DE presents a great opportunity to reach children, youth, and adults and include them in educational efforts. One interviewee affirmed that, following an assessment conducted in Jordan before implementing DE, their organization was able to reach the most marginalized girls and children with disabilities, especially those facing physical access barriers at school. This enabled them to access education using the same approach as all other learners (A. Alkhateeb, E-Learning Education Specialist, Plan International–Jordan, personal communication, November 9, 2021).

Box 5: Pedagogical Focus Methodologies

Content curation

According to Sprout Labs (n.d.), content curation is “...a process of selecting resources, designing learning experiences using those resources and then sharing the experiences.”

Asset-based approach

According to the NYU Steinhardt School (2021), “An asset-based approach focuses on strengths. It views diversity in thought, culture, and traits as positive assets. Teachers and students alike are valued for what they bring to the classroom rather than being characterized by what they may need to work on or lack.”

Digital pedagogy

Digital pedagogy is not about using digital technologies for teaching but, rather, about approaching those tools from a critical pedagogical perspective. So, it is as much about using digital tools thoughtfully as it is about deciding when not to use digital tools, and about paying attention to the impact digital tools have on learning (University of Toronto Libraries, n.d.).

1.8 THE PRACTICE OF DISTANCE EDUCATION IN EMERGENCIES

This paper presents examples of practices recommended to enhance the effectiveness of DE in emergencies. These examples were drawn from materials referenced and from the experts and practitioners consulted during the preparation of this paper:

- Apply an inclusive, collaborative, and participatory process that involves all learners, teachers, stakeholders, and affected community members throughout the different phases of preparedness, response, and recovery (INEE Minimum Standards Domain One: Foundational Standards).
- Provide pedagogical, technological, and social-emotional support for both teachers and learners on an ongoing basis.

- Provide support in accessing and applying online DE (i.e., media and technology tools, connectivity, training in the use of DE).
- Apply methodologies with a pedagogical focus, including foundational pedagogy, content curation, asset-based approaches, and digital pedagogy.
- Prepare comprehensive manuals in the appropriate languages.
- Offer supervisory and institutional supports, including but not limited to:
 - Providing teachers with relevant professional development
 - Articulating an educational vision
 - Allowing teachers time and space to try new approaches and sometimes to fail, and understand that failure is an important and not unexpected part of DE
 - Supporting teachers when they do fail, both emotionally and technically
 - Ensuring the availability of resources, including training, equipment, and materials
 - Instituting a teacher-appraisal system that outlines structured professional development and digital fluency expectations
- Ensure the provision of systemic support, meaning support from the entity (e.g., humanitarian organization, government ministry) responsible for providing the education services and equipment, stable and reliable internet access, and fixed or mobile broadband.
- Support students in their own skill development. Research findings show that most students lack digital literacy in using spreadsheets and databases. They also frequently lack important functional skills, such as self-regulation and time management, as well as communication skills like reading and writing.
- Ensure that families and communities support teachers. This is critical when teachers confront resistance and obstacles, such as prohibiting girls from accessing technology or devices and prioritizing boys' education over that of girls and people with disabilities.
- Be iterative and adaptable. Given the diversity and complexity of contexts in conflict and crisis, there is no single or simple model for either sustainability or scale. Good building blocks for teaching and learning remain the foundation of quality educational programming, while educational technologies are the least significant factor in the success of a project (Dahya, 2016).
- Build collaboration and partnerships with key stakeholders, such as NGOs, EdTech, startups and other companies, and ICT ministries, to ensure the rapid development and scale-up of remote learning modalities (World Bank, in UNICEF ROSA, 2020).
- Meet educators' and learners' short-term needs while setting medium- to long-term goals (Morris & Tan, 2021).
- Encourage innovative solutions for measuring reach, engagement, and outcomes during a quick pivot to distance learning, while also developing high-quality monitoring, evaluation, and learning strategies for the longer term (Morris & Tan, 2021).

Box 4: Checklists

The checklist presented in this section aims to help the readers of this paper to identify key actions to be made to ensure that a DE response meets the Minimum Standards. The key actions, which are presented according to the adopted circular process for proposed actions in this paper include (1) readiness, (2) planning, (3) implementation, (4) transitioning to blended or face-to-face learning, and (5) monitoring and evaluation. This paper recommends applying all suggested phases and sub-phases and to consider adopting the suggested task ideas.

This checklist and those that follow in this document all have the same format:

Column 1 proposes a circular process of five phases: readiness, planning, implementation, transitioning to blended or face-to-face learning, and monitoring and evaluating.

Column 2 presents sub-phases considered as “must do.”

Column 3 includes task ideas that are considered “nice to do.”

Column 4 presents useful resources for each phase, noting that the cited resources may apply to more than one phase.

Checklist 1: Verifying That Distance Education Meets INEE Minimum Standards

Phase:

READINESS

Sub-Phase	Task Ideas	Useful Resources
Institutionalize INEE Minimum Standards	<p>Endorse INEE Minimum Standards</p> <p>Articulate how INEE Minimum Standards will be used</p> <p>Include INEE Minimum Standards in all aspects of human resources management</p> <p>Integrate INEE Minimum Standards into educational programming</p> <p>Design necessary assessment, including the needs assessment of teachers and learners, the status of available technology, teacher and learner access to these technologies, and material available for offline DE</p> <p>Anticipate crises and develop an emergency response plan</p> <p>Adopt a process to structure your DE intervention, whether the suggested circular process in this paper or any other suitable process</p>	<p>INEE Minimum Standards Institutionalization Checklist for Inter-agency Coordination within an Education Cluster (INEE, 2011)</p> <p>List of COVID-19 Emergency Response Plans (INEE, 2020)</p> <p>EiE Harmonized Training Package (INEE, 2010)</p> <p>Guideline emergency response preparedness: Draft for field testing (IASC Task Team on Preparedness and Resilience, 2015).</p> <p>Annex 3: Resources to Structure a Distance Education Intervention</p>

Phase:
PLANNING

Sub-Phase	Task Ideas	Useful Resources
<p>Plan to meet INEE Minimum Standards and ensure that the foundational standards are integrated, with responses based on an initial assessment</p>	<p>Adapt INEE Minimum Standards to the local context: develop a locally relevant, concrete, and implementable plan</p> <p>Contextualize and integrate INEE Minimum Standards before the onset of any emergency as part of the educational contingency planning and preparedness</p> <p>Analyze the interaction between the intervention and existing risks and conflicts to ensure “no harm” is done</p>	<p>INEE Minimum Standards Contextualizations (INEE, 2011)</p> <p>EiE Harmonized Training Package (INEE, 2010)</p>
<p>Prepare and anticipate emergencies and crisis scenarios by developing corresponding education contingency and preparedness plans</p> <p>Prepare to integrate DE as part of the education ecosystem</p>	<p>Agree on a necessary toolkit or other needs assessment tools</p> <p>Elaborate a training plan for the use of the assessment tools to be included in preparedness and contingency planning</p> <p>Share findings and data with education authorities and the wider coordination group to support a coordinated response</p>	<p>Guideline emergency response preparedness: Draft for field testing (IASC Task Team on Preparedness and Resilience, 2015).</p> <p>List of COVID-19 Emergency Response Plans (INEE, 2020)</p>

<p>Develop an educational program, including the necessary budget and potential financial resources</p>	<p>Align the project with the national ministry of education's priorities and measures</p> <p>Elaborate an equitable, inclusive, gender-sensitive, conflict-sensitive, and quality educational intervention</p> <p>Elaborate an estimated budget and identify potential financial resources</p> <p>Assess existing policies and implementation strategies for the effective management of teachers in refugee contexts</p> <p>Elaborate a support plan for both learners and teachers, including holistic teaching and learning opportunities</p> <p>Identify the possible accreditations relevant to learners and teachers</p> <p>Prepare capacity-building modules and manuals for systems running Teacher Professional Development. This includes psychosocial support manuals that enable education institutions to maintain and provide psychosocial services for teachers</p>	<p>INEE Minimum Standards Domain 1: Foundational Standards (INEE, 2010)</p> <p>Covid-19 Education Response Issue Note N°2.4: Crisis-sensitive Educational Planning (UNESCO, 2020)</p> <p>Education in Crisis Interactive Evidence Pathways (USAID, 2019)</p>
<p>Recruit necessary staff</p>	<p>Identify the dedicated staff required at the institutional level, such as administrative, technical, and specialized staff, accounting for the significant preparation DE teaching requires</p>	
<p>Adapt the curriculum for DE</p>	<p>Condense the curriculum and adapt it to DE</p> <p>Prioritize learning, understanding that time is frequently more limited with distance learning</p> <p>If blended learning is the approach, prioritize what is best taught and learned in person and what can be taught and learned online</p> <p>Often condensing the curriculum means breaking it down into "bitesize" lessons, including lessons of a size that can be shared via texts or very short videos</p>	<p>Catching Up on Lost Learning Part 1: Applying Accelerated Approaches in Response to COVID-19 (INEE, 2020)</p> <p>Catching up on lost learning. Part 2: Condensing a curriculum in response to COVID-19 (INEE, 2020)</p> <p>Methods of teaching with an online focus (Tony Bates Associates, 2019)</p>

<p>Set up the logistics, whether through technology and/or paper, for organizing distance teaching and learning activities</p>	<p>Procure the necessary materials, equipment, and services</p> <p>Devise a delivery schedule, including individuals responsible for delivery and a communication plan for rollout</p> <p>Provide training to familiarize users with tools to be used</p> <p>Ensure that maintenance and/or troubleshooting needs are addressed, including technical issues for students, parents, and teachers, and an approach to answering students' or parents' questions about the materials</p> <p>Ensure user access and the reach of the approach</p>	
<p>Collaborate with all stakeholders</p>	<p>Identify local capacities (local faith actors, local leaders, community-based groups, and leaders) and resources</p> <p>Identify potential collaboration and partnership opportunities</p> <p>Identify community "champions," who are respected leaders in their communities, to promote DE as an effective approach to teaching and learning</p> <p>Promote an expanded mindset regarding who is responsible for supporting students in their learning, including siblings and extended family, as well as community members and neighbors</p> <p>Expand the mindset of where learning can occur, including rotating the houses that can host or gathering a group in the public square</p>	
<p>Make necessary organizational and pedagogical decisions for a relevant, effective, and efficient DE intervention</p>	<p>Decide on the organizational structures for DE</p> <p>Decide on the DE teaching mode: offline, online, or both</p> <p>Adopt a recognized syllabus and/or curriculum</p> <p>Decide on the delivery channel (online or offline) to be used to realize the planned learning outcomes, which will suit both learners and teachers operating at a distance and how to integrate the needs of both students and teachers</p> <p>Adopt an asset-based approach and digital pedagogy assessment</p>	<p><u>Methods of teaching with an online focus</u> (Tony Bates Associates, 2019)</p>

Phase:
IMPLEMENTATION

Sub-Phase	Task Ideas	Useful Resources
<p>At start-up, assess and provide a rapid response; set the frequency for updating the assessment based on the changes observed in the context</p>	<p>Integrate a DE assessment into the emergency joint assessments to identify capacities, opportunities, and gaps in education provision</p> <p>Provide mental health and psychosocial support for children, parents, and teachers; see, for example, the UNESCO issue note on health and nutrition during home learning and World Health Organization guidelines on providing psychosocial support in emergency settings, as adapted for COVID-19</p> <p>Enable the continuation of learning across subjects</p> <p>Focus teaching on reinforcing prior knowledge and imparting new curricular knowledge</p> <p>Consider lessons learned and the recommended practices of the following four recommended programs to bring back and/or keep learners on track: extended instructional time, catch-up programs, remedial education, and accelerated education programs</p>	<p>Quality holistic learning project map (Carey Institute for Global Good and Refugee Educator Academy, 2021)</p>
<p>Manage the daily routine of DE</p>	<p>Keep learners engaged and motivated to learn</p> <p>Provide well-designed teaching and learning activities, parental guidance (especially for parents of early grade children among the learners), and increased use of formative assessments</p> <p>Ensure learners' continuous participation in DE programs</p> <p>Maintain the quality of learning</p> <p>Facilitate extra-curricular learning, e.g., digital skills</p>	<p>Sustainable learning framework (Carey Institute)</p>

Phase:

TRANSITIONAL PHASE TO BLENDED OR FACE-TO-FACE LEARNING

Sub-Phase	Task Ideas	Useful Resources
Sustain teachers' and learners' improved distance learning and digital skills	Identify and sustain effective pedagogical methodologies, especially technology-enhanced innovations Continue to promote the mindset that technology should continue to be part of teachers' and learners' toolboxes, even if blended/face-to-face learning is possible	

Phase:

MONITORING AND EVALUATING

Sub-Phase	Task Ideas	Useful Resources
Ensure foundational standards regarding continued monitoring and evaluation are integrated Regularly review progress and quality Evaluate DE courses and platforms that could be integrated into more open, resilient school systems	Collect data and monitor DE Re-assess as frequently as necessary Review and adapt your plans based on evidence	<u>Ensuring effective distance learning during COVID-19 disruption: Guidance for teachers</u> (UNESCO, 2020)



Rohingya children learning with technology in Bangladesh, 2019 © IRC

2. STRATEGIES

As mentioned in the objectives, this paper provides quick guidance tips in three focus areas recommended by INEE: Teacher Professional Development, technology for education, and enabling policies for DE in emergencies.

2.1 THE EDTECH LANDSCAPE WHILE MEETING INEE MINIMUM STANDARD DOMAIN 2: ACCESS AND LEARNING ENVIRONMENT

2.1.1 Targeted Users and Objectives

The main audience for this section is:

- Education institutions
- Authorities
- Private-sector firms investing in education technology
- INGOs and national and local NGOs
- Education practitioners

Box 7: Definition of Education Technology

Education technology is an umbrella term that encompasses all education programming and policies in which technology may be used to improve interventions, outputs, and outcomes. It includes the use of technology in the classroom, in school management and leadership, and in the wider education environment.

Source: Muyoya et al., 2016

Teachers are an audience sub-category.

The objectives of this section are to:

- Present the benefits and challenges of the contribution education technology makes to advancing DE in emergencies
- Present recommendations for better use and/or development of education technology in DE in emergencies

2.1.2 The Use of EdTech in Online Distance Education in Emergencies

The basic technical prerequisite for low-tech solutions to provide EdTech-based DE solutions in emergencies is the availability of the proper hardware; for high-tech solutions, the basic prerequisite is the availability of electricity, connectivity, and hardware.

Survey figures from 127 countries presented by Dreesen et al. (2020, p. 10) show the poor availability of the basic technical prerequisite for EdTech in most of the countries covered:

- The internet is used in 71 out of 183 countries with data; less than half these countries' populations have access to the internet
- TV and radio access varies considerably across and within these countries; in 40 of the 88 countries with data, the TV ownership rates of urban households are more than double that of rural households
- Only 65% of the households in these countries that are in the poorest wealth quintile had electricity

These figures, which Ashlee et al. (2020, p. 16) also found cited as primary challenges in much of the literature they reviewed, help with estimating the status of these technical prerequisites among people affected by emergencies (UN Global Trends 2020, cited in UNHCR, n.d.) and those who live under poor conditions and infrastructure. Dreesen et al. (2020, p. 10) concluded that no single delivery channel for DE is sufficient to reach all children, and rural poor are far more likely to be left out of technology-enabled DE interventions.

Ashlee et al. (2020) conducted a literature review that shows the types of technology used most often to provide access to education for refugee learners include mobile phones, tablets, computers, and, less frequently, radio. The review highlights two dominant types of media used for refugee education: personal smartphones, tablets, and other handheld devices that enable mobile learning; and “connected classroom” packages that combine computers and digital learning content. The type of technology that can be leveraged for educational purposes varies for refugees according to whether they live in urban or camp settings, which leads to the conclusion that refugees residing in urban areas have access to a greater variety of technological tools (Ashlee et al., 2020).

The year 2021 was pivotal for EdTech in another way: EdTech development pre-COVID-19 was ad hoc, occasional, and isolated, whereas EdTech development post-COVID-19 was becoming, as one interviewee noted, “more mature” and going “beyond the binary of accessible/not accessible” by tackling “intersectional issues.” This means that EdTech developers are now looking at what people are already using rather than

importing something new. Nevertheless, this interviewee said the EdTech landscape was still marked by “very top-down, colonial practices” (L. Stannard, Save the Children, INEE DERG member, personal communication, November 2, 2021).

EdTech innovations around the world have evolved during COVID-19, especially low- and hi-tech solutions. Many EdTech companies improved their services and products during the pandemic, and many initiatives from the private sector, governments, INGOs, and UN agencies focused on uploading courses in multiple languages.

International organizations in the humanitarian sector also took part in promoting and implementing EdTech innovations. This included Airbel Labs at the International Rescue Committee (IRC), which funded and, in partnership with Handshake, created a central repository that maps EdTech innovations. The [EdTech Open Atlas: Mapping the World’s Innovations in Education Technology](#) is a crowdsourced repository of EdTech projects that enables teachers, learners, and caregivers around the world to discover the methods and tools they need to meet their education needs (Kirshbaum et al., 2021).

Curation of EdTech solutions remained a major focus under COVID-19 programming. (e.g., [UNESCO Distance Learning Solutions](#) and the [2021 Global Learning Landscape](#)). A variety of platforms were developed to assist teachers and learners in emergencies, including messaging applications by Viber, Signal, and WhatsApp. Platforms also were specifically designed including:

- [Edraak](#), a non-profit massive open online course (MOOC) portal established by Queen Rania al Abdullah of Jordan for the promotion of knowledge in the Arab world
- [Rwaq](#), an Arabic Massive Open Online Courses Platform
- [Kodrat](#), UNESCO’s online platform serving as a resource for distance learning for teachers, in Arabic

The wide range of applications used included SMS, interactive voice response, chatbots, Telegram, and WhatsApp, as well as the [many digital tools, applications, and platforms](#) used for formative feedback and to have a social presence. WhatsApp gained a lot of popularity as a medium of exchanging lessons, communicating with learners and parents, and enabling the formation of support groups among teachers and education institutions, which leveraged an application they already were using. In emergencies, WhatsApp’s portability enabled it to be accessed on smartphones by people unable to access regular education services or schools, including people on the move and people confined to their homes.

In order to understand the effectiveness of DE under EiE contexts, INEE in 2020 initiated a review of challenges, lessons learned, and best practices in the response to COVID-19. Their findings were published in the [INEE Mapping Report: Distance Education in Emergencies](#), which includes an analysis of what is needed to ensure effective DE delivery under high-, low-, and no-tech scenarios. The report examines which modalities are effective enough to be scaled-up so that the global community will be better prepared for future emergencies.

One interviewee stated:

“The applied use of technology and the critical skills needed to effectively use it and safeguard against it should be an inherent part of education. There is no longer room for classrooms to function in an anti-media and anti-technology environment. In line with the SAMR model [substitution, augmentation, modification, and redefinition], technology should be used trans-formatively for 21st-century skills.”

(K. Williams, PhD International Education Policy, Graduate Research Assistant at the UMD Teaching and Learning Transformation Center, INEE DERG member personal communication, November 10, 2021)

2.1.3 Benefits of EdTech for Online Distance Education in Emergencies

The World Bank (2016, p. 5, cited in Joynes & James, 2018) views ICT as having “great promise” for

- Refugee settings where educational needs have not been addressed
- Making low-cost education available almost anywhere, with a curriculum and a records system that move with students
- Meeting the needs of those unable to attend school in person
- Providing options to certify a student’s educational achievement in their home country or host country by linking the digital content to their country’s national curriculum
- Offering teachers, tutors, and facilitators pedagogical training, where they can share materials, advice, and assessments/documentation of learning
- Rapid assessment and mapping of education systems
- Providing parents and caregivers with information on a regular basis

2.1.4 Possibilities for Using EdTech to Improve the Effectiveness and Quality of Online Distance Education in Emergencies

EdTech could be useful to improve the effectiveness and quality of education as follows:

- EdTech could be a way to support the continuity, resilience, and responsiveness of education. “The Ideas Box,” for example, is a portable and customizable multimedia center that enables refugee children in Burundian refugee camps to have access to educational and information resources, such as computers, mobile phones, and tablets (UNESCO, 2018, in Ashlee et al., 2020).
- EdTech could be a way to develop low-cost solutions for broadening education access.
- EdTech could improve the alignment between what devices/connectivity are available and which students have access. For example, an organization in Lebanon used a flexible approach with students, including extending the homework deadline for a week to enable children in households with only one device for multiple siblings to have the time needed to complete assignments (Jusoor, 2021).
- EdTech has the potential to provide greater equality, as it can reach even the most vulnerable when schools are under attack, affected by natural disasters, experiencing the effects of climate change, or are otherwise unable to be reached.

- EdTech provides more resources and more tools with digital platforms.
- EdTech eases the updating of digital content.
- EdTech offers improvements that help to fine-tune what education is already being offered.
- EdTech offers a great way to provide support, including peer-to-peer, expert, or paid facilitator support, even in emergencies. Such support can, and should, include support for teachers' well-being.
- EdTech increases the number of ways various technologies can be useful and effective, such as SMS and interactive voice response.
- EdTech is a viable option for accessing education for those living at a distance from school or who cannot travel because of a disability, etc.
- EdTech provides the capacity to reach people at scale and adapt learning materials more easily to different languages and cultures.

2.1.5 Major Challenges in Implementing and Using EdTech in Online Distance Education in Emergencies

Innovations in EdTech do not determine the quality of a solution. As Petrie et al. (2020, p. 6) point out, "The key challenge is elsewhere: how to implement these innovations extremely well in different contexts and at scale while taking good care of everyone involved in the process." EdTech solutions need to be relevant to existing needs, to managing the existing challenges in a certain context, and to challenges faced by targeted users. Examples of such challenges follow

Poor infrastructure across refugee settings, including lack of internet connectivity and electricity

Many cite this challenge (e.g., Anderson, 2013; Ashlee et al., 2020; Burde et al., 2015; Kimwise et al., 2019; Lewis & Thacker, 2016; Taftaf & Williams, 2020; Tauson & Stannard, 2018; Unwin et al., 2017). The interviewees also commented on the access/reach conundrum, where the reach of infrastructure is increasing but the inequities in access to devices continue. Many learners have no access to devices, and even if they do, they may need special accommodations to use them (e.g., learners with disabilities).

Persistent gender barriers in accessing technology

EdTech is said to have potential to increase girls' access to education. Inspiring Girls Enjoy Reading, for example, is a program that provides adolescent Syrian refugee girls who attend secondary school in Za'atari refugee camp with access to digital resources and open learning (UNESCO, 2018; Wagner, 2017, in Ashlee et al., 2020). EdTech also may exacerbate inequality in society (Tauson & Stannard, 2018, in Ashlee et al., 2020). For example, evaluations of UNHCR's community technology access program and the International Education Association on digital learning innovations in Lebanon reveal higher enrollment rates for boys and young men than for girls and young women (Anderson, 2013 and Tawileh, 2018, in Ashlee et al., 2020). The Afghanistan Demographic and Health Survey (2015, cited in UNICEF ROSA, 2020) shows that girls in Afghanistan, especially adolescent girls, are much less likely than boys to have access to a mobile device.

The implementation of EdTech and the challenge of sustainability

The logistical feasibility and the maintenance of certain technological tools along with content might have implications for full cost appraisals over the lifetime of certain interventions.

Decontextualized interventions

EdTech content is often not contextually or culturally relevant, is frequently developed without quality-control measures in place, often is not aligned with local curricula, and is rarely provided in languages other than English, which prevents continuity of the learning cycle. (Lewis & Thacker, 2016; UNESCO, 2018, Joynes & James, 2018, Menashy & Zakharia, 2019, in Ashlee et al., 2020).

The high probability of the most vulnerable being excluded

The EdTech digital divide and its lack of inclusive design may cause the most vulnerable populations to be excluded. The digital divide affects children from the lower wealth quintiles and vulnerable groups such as disabled and refugee children in that they have less ready access to radio, TV, and online learning resources (Mueenuddin et al., 2021). Students without access to technologies, younger children, and those with disabilities have been excluded from distance learning in Ethiopia, Rwanda, South Africa, and South Sudan. The transition to remote learning exacerbated this exclusion, due to poor connectivity, learners' lack of digital skills, and the need to adapt the pedagogy to remote learning (Mueenuddin et al., 2021). There is limited evidence in the literature as to whether the design of EdTech allows for the inclusion of refugee children with disabilities in distance education (Wagner, 2017 in Ashlee et al., 2020).

Device-related challenges

Low-cost mobile phones have very small, low-resolution, non-touch screens, which makes it much more difficult, if not impossible, for learners with this type of phone to engage and interact with educational content (UNICEF ROSA, 2020).

Community perceptions of EdTech

A study cited by Ashlee et al. (2020) notes that, in the Rohingya refugee camps in Bangladesh, many research participants viewed technology as unsuitable for providing education (Karim & Hussain, 2019, in Ashlee et al., 2020)

Favoring traditional, teacher-centered approaches over active learning

Many EdTech applications require an active learning approach (Bock et al., 2020; UNESCO, 2018; Kamal & Diksha, 2019, in Ashlee et al., 2020). This was a major challenge of the Instant School Network project run by the UNHCR in Dadaab refugee camp in Tanzania (Ashlee et al., 2020).

Challenges of implementation due to teachers' experience

Technology specialist Mary Burns describes the challenge of implementing DE due to weak teaching standards.

In the world of education, we often think that technology can be used to leverage good teaching, good content knowledge, good assessment knowledge. But this is not true. It is much easier to get teachers who know nothing about technology but who are strong in content, strong in instruction, strong in assessment, and teach them the technology. . . They will use it better, in my experience, than teachers who are strong in technology with limited experience in pedagogy.

(Senior Technology Specialist, Education Development Center, INEE DERG personal communication, November 5, 2021)

While EdTech shows promise as a vehicle for learning and a tool for supporting learning as an activity, it alone is not a panacea for ensuring learning outcomes.

Polarized opinions among EdTech users

The EdTech landscape is divided between those who believe that technology should be leveraged more effectively to contribute to learning outcomes and those who believe that education and technology already complement each other.

Culbertson et al. (2019) present the following additional challenges:

- A lack of evidence of EdTech's effectiveness inside and outside of refugee settings (UNESCO, 2018; Vosloo, 2018; Wagner, 2017 as cited in Culbertson et al., 2019)
- The lack of formal recognition and certification of digital learning, leading to questions of its value
- Issues of stability and consistency, which depend on teachers and students having access to a place that is conducive to learning when schools are not accessible
- A lack of planning across the life cycle of the system from project launch to system shutdown, which can weaken tech investments
- The absence of ethical, security, and privacy frameworks prior to launch or, when they do exist, frameworks that are not fully fleshed out and thus are fragmented

Some further areas highlighted during research relate to the potential misuse of data, including using teachers' assessment data to evaluate rather than support them. INEE experts further highlighted the following:

- EdTech might be counterproductive in the absence of competency-based standards and micro-credentials for teachers
- The constraints imposed by the living conditions of learners affected by crisis (e.g., crowded spaces, lack of space and time to study) often get in the way of online DE
- Inability to provide the interpersonal connection that displaced learners really need and would get at school
- The belief that providing infrastructure and connectivity means the work is done

- Information and content delivery at times when parents/children are unavailable (e.g., they are working or doing chores) can interfere with delivery via radio and television programming
- Teachers and learners have significant gaps in their tech competency

Another significant challenge is offering DE Technical and Vocational Education and Training (TVET), as this type of education generally requires in person education since it is heavily dependent on learning-by-doing and centered on acquiring specific techniques (e.g., as automobile mechanics via hands on practice) for a considerable period of time.

A final challenge one interviewee mentioned is that “collected data is often not analyzed.” As a result, the process of evidence-based decision-making gets affected. For example, lessons learned from CAMFED on the use of mobile technology to monitor education in Ghana, Tanzania, and Zambia emphasize the importance of “thinking carefully about what data is needed, where the data will sit, who will collect it, who might feel bypassed if the data is being sent directly without being first reviewed” (Haßler et al., 2018).

2.1.6 Education Technology for Online Distance Education in Practice

Essential recommendations and guidance for EdTech in online DE can be found in the Principles for Digital Development and INEE Minimum Standards for Education in Emergencies. Additional practical recommendations emerged from the literature reviewed and through consultation with experts and practitioners in the field of EdTech in online DE. These recommendations include the following:

Increase the potential access of EdTech, especially for the most vulnerable, including girls, young women, and learners with disabilities, and for female teachers

According to countries covered by the studies of UNICEF (2020) and Dreesen et al. (2020) the usage of multiple channels was necessary to deliver DE with an increased reach of all children, especially the most disadvantaged. Figures from UNICEF Covid-19 Education Response Survey- 127 countries (Dreesen et al., 2020) show that 68% used some combination of digital and non-digital approaches in their education response to school closures (e.g., TV, radio, and take-home materials) (UNICEF, 2020; Dreesen et al., 2020). These various EdTech solutions should adhere to inclusive design standards that support the needs of all users, including children, youth, and teachers living with disabilities (e.g., blindness, deafness, cognitive impairments), the languages of host countries and countries of origin, and learners of all ages (UNESCO & UNHCR, 2017).

Provide EdTech using a combination of online and offline components

According to Ashlee et al. (2020), the literature states that the EdTech tools used in refugee contexts should have both online and offline components. The online version provides the opportunity to gather and disseminate materials globally.

Consider ethics before running pilot projects or beta-testing new tools and during their implementation

To prevent the further marginalization of vulnerable communities, the ethics of running pilot projects or beta-testing new tools or initiatives in fragile contexts should be considered carefully. A risk assessment of potential harm should be conducted at the outset of any intervention or testing and should include a plan to integrate the lessons learned so that all users can benefit in the implementation phase (Dahya, 2016).

Contextualize and promote continuity

As stated by Ashlee et al. (2020), “There is no ‘one-size-fits-all’ EdTech solution.” EdTech content must be contextualized, adapted to learners’ needs and languages, and offer continuity. Educators and learners need to be able to easily identify and amalgamate quality content by content area, grade level, etc., and ensure that it is aligned with curricular standards, corresponds to certifications, and provides pathways to pursue education after completing school (UNESCO & UNHCR, 2017).

Provide alternatives where prerequisites are lacking

Electricity is not always required for DE interventions. Using solar-powered devices is an option where reliable electricity and power grids are not available. Moreover, preloading software on tablets can circumvent the need for internet access, according to one interviewee. His organization focuses on building foundational numeracy and literacy, which uses only a portion of tablet capacity; this means that additional content could be loaded (J. Wolf, Imagine Worldwide, personal communication, November 8, 2021).

Enable meaningful two-way interaction between students and their teachers

Having technology available is necessary for effective remote learning, but it alone is not sufficient. To be most effective, remote learning needs to allow for meaningful two-way interaction between students and their teachers, possibly by leveraging the most appropriate technology for a specific context (World Bank Group, 2021).

Improve the design of EdTech to serve education

EdTech solutions need to be modular, intuitive, and easy to use. They need to require little training, be usable in any low- or high-resource education contexts, and be flexible enough to accommodate specific student circumstances (UNESCO & UNHCR, 2017).

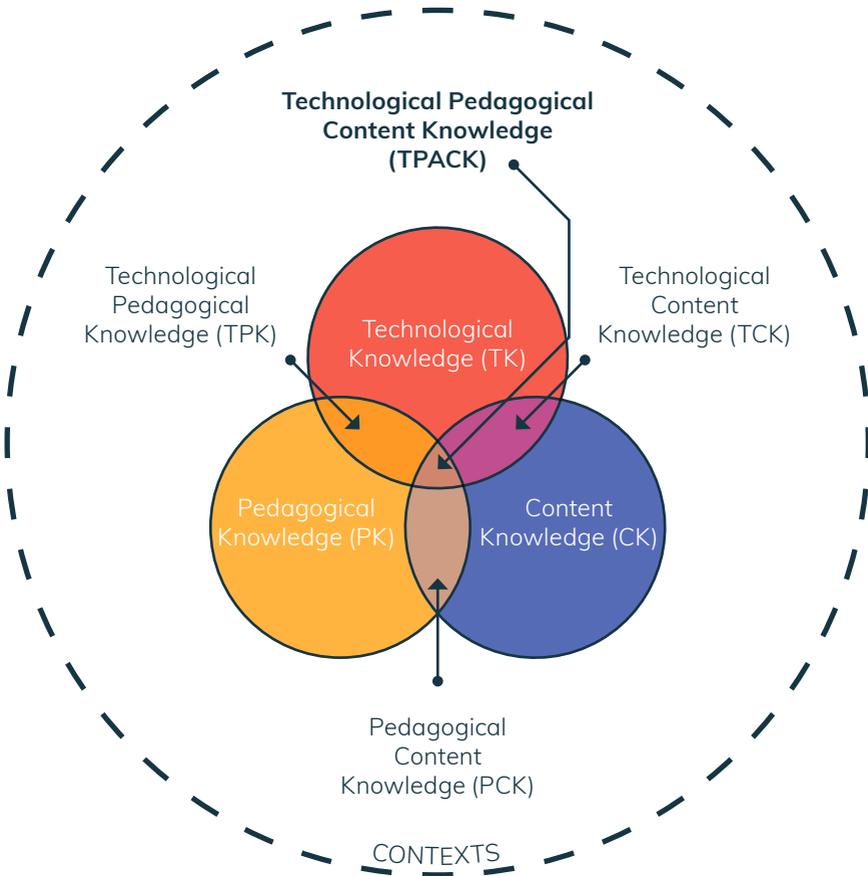
Linking every student with a unique identifier (UID) in systems enables administrators to track progress. One interviewee offered a caveat, however, stating that “UIDs also significantly increase programmatic complexities (e.g., logins/large classes) and have significant protection/child-safeguarding issues if not done correctly” (L. Stannard, Save the Children, INEE DERG member, personal communication, November 2, 2021).

Seek guidance from EdTech integration model frameworks

Frameworks have been developed to inform and shape the use of technology and integrate it into lessons. Doing so effectively requires knowledge of the frameworks, including their limitations and possibilities. For example:

- SAMR Framework: This framework offers a spectrum of ways to use tech in the classroom, beginning with substitution and progressing to augmentation, modification, and refinement. This framework can enable teachers to think about whether using EdTech will enhance or transform their students' learning.
- TPACK Framework: TPACK builds on Shulman's (1986) concept of pedagogical content knowledge and is shown in Figure 3. Its aim is to recognize the knowledge teachers need to integrate EdTech into their classrooms, while also recognizing that this knowledge is "complex, multi-faceted, and situated" (Koehler, 2012).

Figure 3: The TPACK Framework



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- Community of Inquiry Framework: This framework points to three key types of “presence” that must be established for students’ ability to learn; for students to be satisfied with the course or class and the teacher or lecturer; and to promote students’ feelings of belonging, defined in this case as social presence, cognitive presence, and teaching presence (Akyol & Garrison, 2008; Arbaugh, 2008; Richardson et. al., 2017, cited in Huang et al., 2020). One interviewee pointed to how this framework’s inclusion of social presence can spur teachers to develop strategies to get to know their students when online, which would be similar to “backpack time” in physical classrooms (K. Williams, PhD International Education Policy, Graduate Research Assistant at the UMD Teaching and Learning Transformation Center, INEE DERG member, personal communication November 10, 2021).

Build collaboration among stakeholders

Collaboration among the many stakeholders in EiE is recommended in the Minimum Standards, especially Domain 1, and in the Principles for Digital Development, particularly Principle 9. Some experts and practitioners consulted for this report advocated for EdTech companies to consult with teachers, with support from their institutions, so they can voice their concerns.

According to Haßler et al. (2018), those working in area of EdTech, organizations, and government should collaborate by sharing information, insights, strategies, and resources across projects. This pooling of resources would benefit their respective initiatives and the global community.

Various other benefits and examples of collaboration were recognized across the literature. Several key ones include:

- Collaboration between broadcasters, education authorities, and educators as a main factor of successfully implementing radio- and television-based educational programs
 - For example, collaboration with the ministries of education in Lithuania, Georgia, and Australia was key to the development of radio and television DE programs, as it was important that the classes fit the national study plan (UNESCO & the European Broadcasting Union, 2020).
- Partnerships have the potential to scale-up benefits. For example:
 - Online textbook publishers and universities have partnerships that contribute to volume discounts
 - In Senegal, the newly established partnership between Ecole au Senegal, Senegal’s first digital educational platform, and Solve Education! (2021), a Singapore-based global EdTech nonprofit, is expected to make EdTech accessible to many African youth. Another partnership between Senegal’s Ministry of Education and Microsoft has generated online textbooks.
- Collaboration with other sectors is crucial for safe school reopening (Mueenuddin et al., 2021).

Align and complement technology, teaching, and learning

According to the World Bank (2021), effective remote learning requires three complementary aligned components: suitable technology, effective teachers, and engaged learners.

2.1.7 Conclusion

Requiring electricity, internet connectivity, and hardware is the primary technical challenge in accessing online DE by people in low-income countries who are affected by emergencies. Researchers note that the technologies used most often to provide access to education for refugee learners are mobile phones, tablets, computers, and, less frequently, radio.

After the closing of schools due to COVID-19 and the swift transition to DE around the world, EdTech innovations have evolved, especially low- and hi-tech solutions. International organizations in the humanitarian sector took part in promoting and implementing EdTech innovations. For example, INEE initiated a review of the challenges, lessons learned, and best practices in the response to COVID-19, which resulted in the [INEE Mapping Report: Distance Education in Emergencies](#). Essential recommendations and guidance for EdTech development, use, and refinement may be found in the Principles for Digital Development and the Minimum Standards for Education in Emergencies. Additionally, evidence collected from researchers, practitioners, and experts recommends increasing the effectiveness of EdTech in learning and teaching processes by following these suggested actions:

- Increase potential access to EdTech, especially for the most vulnerable learners, including girls, young women, and learners with disabilities, and for women who are teachers
- Provide EdTech using a combination of online and offline components
- Consider ethics before running pilot projects or beta-testing new tools and during their implementation
- Contextualize and promote continuity of learning
- Provide alternatives where pre-requisites are lacking
- Allow for meaningful two-way interaction between students and their teachers
- Improve the design of EdTech for serving education
- Seek guidance from EdTech integration models, such as the [SAMR Framework](#), the [TPACK Framework](#), and the [Community of Inquiry Framework](#)
- Build collaboration between stakeholders

Finally, there is no unique or common EdTech solution to ensuring access to quality education for learners affected by emergencies. However, there is a process for ensuring that EdTech contributes to the continuity of quality learning, which requires the contextualization of EdTech content and solutions that respond to all users' needs, especially those of learners and teachers.

Checklist 2: EdTech in Online Distance Education in Emergencies

Phase: READINESS		
Sub-Phase	Task Ideas	Useful Resources
Align with and use the Principles for Digital Development	Assess local conditions	INEE Conflict Sensitive Education Pack (INEE, 2013)
Prepare and assess	Assess potential technology's availability, reach, accessibility	Education in conflict and crisis: How can technology make a difference? (GIZ, 2016)
	Assess the potential reach and accessibility for different users (e.g., boys, girls, young men, young women, especially persons with disabilities, other highly vulnerable persons)	Checklist for ICT Interventions to Support Education in Crisis and Conflict Settings (INEE & USAID, 2018)
	Assess users' knowledge of the technology	Synergies between the principles for digital development and four case studies (REAL Centre at Cambridge University, 2018)
	Assess the potential for local maintenance and sustainability	
	Identify the opportunities and limitations to adopting software and hardware under the existing conflict and/or crisis setting	
	Assess the political nature of educational content, particularly when derived from external resources and, consider the needs of host communities	
	Use existing conflict analysis tools (such as the INEE Conflict Sensitive Education Pack)	
	Explore informal learning structures, such as digital media and social networks	
	Determine which modalities to use in the context by considering the quality of content available, the education system's level, the learning environment, and the community and home environment	
	Identify local maintenance and procurement providers to sustain using locally available tools and technologies	

Phase:
PLANNING

Sub-Phase	Task Ideas	Useful Resources
<p>Elaborate your plans</p>	<p>Plan for ICT in education, with a focus on inclusive, gender-sensitive, and conflict-sensitive education and a “do no harm” approach</p> <p>Assess the potential negative impact of the chosen tech, noting that a lot of modalities may increase inequalities if not used wisely</p> <p>Plan to adapt programs and technology solutions to their implementation context, with explicit learning goals and system support for all users</p> <p>Identify and set a clear definition of the reason for using technology before implementation</p> <p>Plan for efficient technology, e.g., consider the chosen technology’s potential to reach more than one individual with a single device</p> <p>Develop a strategy to maximize the reach and accessibility of the chosen technology</p> <p>Outline the protocol for training and maintenance for each setting</p>	
<p>Curate EdTech and/or consult with content curation professionals /organizations</p> <p>Ensure the flexibility and accessibility of the chosen EdTech</p> <p>Ensure that EdTech is culturally acceptable</p> <p>Ensure that EdTech offers quality and relevant content for all learner levels</p>	<p>Curate all potential Learning Management Systems (LMSs) and applications, and mitigate potential risks to targeted EdTech users</p> <p>Identify what is best for learning support, talent development, and education management</p> <p>Break down the EdTech according to what best matches the need, rather than considering EdTech is a monolith</p>	<p>EdTech global landscape analysis (Airbel Impact Lab, 2021)</p> <p>Spotlight: Quality education for all during Covid-19 crisis (HundrED, 2020)</p>

<p>Pilot technology with teachers and other users</p> <p>Seek to simplify the use of Edtech and improve it based on user feedback</p> <p>Collaborate with other stakeholders and ensure strong stakeholder buy-in of the chosen EdTech</p>	<p>Reflect with users on the use of technology to find the solutions they need</p> <p>Use necessary tech combinations</p>	<p>Checklist for ICT Interventions to Support Education in Crisis and Conflict Settings (INEE & USAID, 2018)</p> <p>Remote Learning COVID-19 Response Decision Tree (UNICEF, 2020)</p>
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Phase: IMPLEMENTING

Sub-Phase	Task Ideas	Useful Resources
<p>Rollout EdTech</p> <p>Provide continuous maintenance for EdTech and the hardware</p> <p>Provide continuous support on the use of EdTech</p> <p>Ensure real-time sharing of necessary data</p> <p>Ensure the safety of users and their personal data</p> <p>Monitor risks and good practices</p>	<p>Provide revised/re-designed content for online DE that aligns with the national curriculum by authorized developers of pedagogical content</p> <p>Provide standards that correspond to relevant education and training certifications</p> <p>Provide pathways to pursue education after completing basic schooling</p>	<p>Delivering distance learning in emergencies: A review of evidence and in practice (USAID, 2020)</p> <p>Matrix analyzing potentials and limitations of major distance learning models (Section 2.3) In <i>Ensuring effecting distance learning during COVID-19 disruptions: Guidance for teachers</i> (UNESCO, 2020)</p>

Phase: TRANSITIONING TO BLENDED OR FACE-TO-FACE LEARNING

Sub-Phase	Task Ideas	Useful Resources
<p>Ensure harmony and complementarity between EdTech and face-to-face learning and teaching</p>	<p>Facilitate blended learning and Professional Development for teachers</p>	<p>Refugee education: A rapid evidence review (EdTechHub, 2020)</p> <p>Developing educational platforms for displaced communities: Building a shared vision (UNESCO & UNHCR, 2017)</p>

Phase:
MONITORING AND EVALUATING

Sub-Phase	Task Ideas	Useful Resources
Review progress and quality and adjust as necessary	Reassess needs Collect data regularly about the progress of implementation Adapt to changing local conditions Adapt to provide quality online DE in emergencies	

2.2 BUILDING TEACHER CAPACITY AND MEETING INEE MINIMUM STANDARDS DOMAIN 3: TEACHING AND LEARNING - STANDARD 2: TRAINING, PROFESSIONAL DEVELOPMENT, AND SUPPORT

2.2.1 Targeted Users and Objectives

The main audience of this section is:

- The leaders of education institutions
- The national or local authorities who regulate and manage teachers' Professional Development
- NGOs or INGOs offering, or planning to offer, Professional Development for teachers
- Donors

The objectives of this section are to:

- Present practical recommendations:
 - To set the objectives of building teacher capacity for DE in emergencies
 - To identify the skills needed to build teacher capacity for providing DE in emergencies
 - To determine the quality criteria for building teacher capacity for DE in emergencies
 - Respond to practical challenges for DE in emergencies

2.2.2 Teaching Distance Education in Emergencies

The role of a teacher in achieving student learning goals is the same in all the types of education and in all modalities, both offline and online. The role is also the same in different teaching contexts. INEE's member Diana framed teaching as follows:

Teaching is rocket science. It is a combination of art and science, and the magic happens in the teachers' ability to combine those two things. But if they don't have the art supplies and the science, they can't do it. (Dr. Diana Woolis, Director, Center for Professional Learning, Childhood Education International November 4, 2021)

With DE in emergencies, however, the teaching often happens in challenging conditions with poor security. Teachers' tasks, their working and living conditions, and their social-emotional well-being are all affected by emergencies.

The experts and practitioners consulted during the development of this paper affirmed the principle that all who teach via DE in emergencies should have the benefits of pre-service and in-service training. They also agreed with and echoed the findings from the literature reviewed by Ashlee et al. (2020, p. 24), which states that teachers in emergencies are not limited to trained professionals. They include any individual assuming teaching tasks in formal and non-formal settings, as a volunteer or someone in a paid position. This indicates that most teachers providing educating in emergencies are untrained. Ashlee et al. (2020) note in particular that the group targeted for technology interventions in refugee contexts tends to be untrained teachers.

2.2.3 Setting the Objectives for Teacher Professional Development in Practice

The experts and practitioners consulted perceive teachers' Professional Development to be of high quality when the following objectives are addressed:

- To establish the competency standards (pedagogical competencies, digital competencies, and social-emotional competencies) set in INEE Minimum Standards, as well as national and professional standards
- To create a career pathway that starts with certification and micro-credentials created specifically for teachers in refugee settings who do not have previous teaching experience and who teach in formal and non-formal settings
- To improve teachers' readiness to teach in emergencies
- To adapt and reorient teachers' design skills to meet the requirements of DE
- To allow modeling, practice, and reflection, as an interviewee affirmed, suggesting that teachers be allowed "to see what they are supposed to implement and to analyze modeling for specific components and customize it by designing something based on a particular model." (S. Tutunji, Academic Director of Refugee Education Program, Jusoor, personal communication, November 12, 2021)
- To encourage networking, collaboration, and the exchange of lessons learned and recommended practices among teachers
- To deal with potential barriers to teaching, including:
 - The "often overlooked and complicated attitudinal barriers," that some teachers have toward distance learning, possibly because it is not the job they signed up for (L. Stannard, Save the Children, INEE DERG member, personnel communication, November 2, 2021)
 - The motivational barriers, most likely to be found in emergencies where teachers are not paid regularly, which creates the need for them to hold multiple jobs in order to meet their expenses
 - The additional administrative burden posed by DE, such as selecting the necessary mix of tools for each lesson, creating a quiz for parts of each lesson, and delivering the entire lesson, often while working double shifts

2.2.4 List of Criteria to Ensure Quality in Teachers' Professional Development

Contextualization

The experts and practitioners consulted for this report all agree that teachers' need for Professional Development depends on context, including where teachers are living and where the teaching is taking place, and that it begins with teachers' existing skills. They shared the following relevant insights to highlight the diversity observed across contexts:

- In Iraq, teachers of Syrian refugees and internally displaced Iraqis had pre-existing digital skills needed to integrate tech-based learning into their teaching programs
- In Nigeria, many teachers do not have the digital skills they need for technology-based learning. Their primary teaching tool is lectures, which are hard to deliver online
- In Afghanistan, Nigeria, and Sierra Leone, the gap in digital skills of teachers and availability of hardware infrastructure is significant.
- In the rural hinterland's region of the Philippines, only 2% of the population has internet access; teachers go in and out of communities to disseminate materials, all while facing security risks and coping with physical and emotional fatigue
- In Greece, there is very little support for equipping teachers with digital skills. Teachers there learned a lot in a short time by figuring it out on their own or through peer learning
- Teachers in Syria were displaced many times in one year, which led to discontinuity of education. If they had been trained in DE, they could have continued to teach their students, even as they moved from one location to another
- In Lebanon, many teachers and learners among the refugees have access to one smartphone in their family, which is shared by family members. They are mostly familiar with WhatsApp, so the teachers' Professional Development was designed to meet their and the children's needs by adopting WhatsApp as the main delivery channel. They used short videos condensed to a very small size to facilitate their transfer. The videos were offered along with printed books, stationery. The Teacher Professional Development used a flexible, culturally sensitive approach so that teachers who did not want to appear in videos were paired with other teachers who willing to record content.

Profile of Teacher Professional Development Providers

Teacher Professional Development should be delivered by skilled professionals who have been teachers, and follow-up training should be provided through mentoring and coaching.

National and Institutional Leadership Support

Policymakers and school administrators must ensure that teachers providing DE in emergencies are supported, motivated, and well prepared for emergencies. They also must set policies that provide incentives for teachers to continue their own learning.

2.2.5 Challenges for Teacher Professional Development in Distance Education in Emergencies

According to Burns and Lawrie (2015), a number of challenges complicate and negatively impact teacher Professional Development. These include:

- Challenges related to **contextual conditions**:
 - Whether the emergency is long term, protracted, or episodic, contextual fragility has a negative impact on quality education and learning, which poses significant obstacles to teachers' development, in particular the lack of quality professional development.
- Challenges related to teachers' **personal conditions**:
 - **Qualified teachers are frequently unavailable or ill-prepared** when emergencies occur, as they often are directly affected by a conflict. They may experience physical and/or psychological hardship from the crisis themselves and be required to work within dysfunctional systems.
 - **A large number of teachers enroll in Professional Development, but they do not always complete it.** This is sometimes due to time constraints, or they may be overwhelmed emotionally or socially. An INEE DERG member who participated in DE training for teachers conducted in Colombia by Plan International and the Consortium of the Education Cannot Wait Multi-Year Resilience Programme shared the following challenges that emerged, which hindered teachers' progress:
 - Lack of time due to the workload and increased work responsibilities stemming from the COVID-19 emergency
 - A poor internet connection or the lack of technological devices to access it; these challenges are accentuated during the rainy months
 - Teachers' lack of digital literacy for the required types of tools and platforms should be addressed in the training
 - The health emergency created physical and emotional health difficulties for many teachers, including family illness and loss, as well as high uncertainty and fear about the future (E. Lory, EIE Specialist at Plan International Canada, INEE DERG member, personal communication, November 9, 2021)
- Challenges related to teachers' **work conditions**:
- Teacher identity, confidence to apply new approaches, and professional pride can be eroded by poor working conditions, and such conditions can further deter teachers from embracing change.

According to experts and practitioners consulted for this report mentioned the following challenges related to:

- **Challenges in meeting the quality criteria**:
 - Teacher Professional Development, whether pre-service or in-service, needs to meet or exceed multiple criteria including:
 - Strong content, instructional assessment, and technology knowledge
 - Good communication skills

- An understanding of the context in which teachers operate and live; the learning process of children, youth, and adults; the nature of change management; the complexity of teaching; and the process of behavior change
- **Authorities' lack of interest in teacher Professional Development:**
 - Teachers often are not a priority in humanitarian interventions or education policymaking
 - Often there is a lack of understanding of the benefits of teacher Professional Development
 - A lack of resources is a frequent issue, as an INEE DERG member pointed out:
 - *“Sometimes the authorities such as the MoEs do not have the capacities or the resources, even if they have the will to train teachers, including through distance education. That is why education authorities and education clusters ask partners to support implementation of plans in which training for teachers in distance modalities or face-to-face are included.”* (E. Lory, EIE Specialist at Plan International Canada, INEE DERG member, personal communication, November 9, 2021)
 - The limited opportunities for teachers' Professional Development in emergencies do not offer the necessary quality, nor are they recognized in a uniform way by universities and/or ministries
- Chosen DE delivery channel:
- Offline DE often requires that materials be delivered to and collected from students
- Teaching foundational literacy and numeracy skills at a distance to grades 1 to 3 and even grade 4 is extremely challenging with all DE modalities, offline and online, whereas students in grades 7 to 12 are often more motivated
- In certain contexts, teachers do not know how to use a radio or USB key, much less an online platform
- Predisposition of community and learners:
- There is a range of opinions about the effectiveness and use of online DE
 - Communities can be predisposed to resist accepting DE as a valid education or culturally sensitive education modality
 - Communities must often be convinced of the possibilities provided by DE and the challenges that can be overcome by using it
 - Parents may also be biased against the edtech devices, particularly among those with a high rate of illiteracy
- Perception of education technology:
 - There are individuals who think of technology as being a silver bullet, negating the fact that most edtech technology is built by people with no teaching background. To remedy this, teachers must be involved in creating technology solutions for teaching.
 - Many individuals are unconvinced about the effectiveness of technology solutions. Dialogue and evidence among donors, academia and Edtech industry is required to convince them.

- Some individuals must be convinced that online learning is different from face-to-face learning and that what works face-to-face cannot simply be transferred online. An interviewee argued that “time online is precious and cannot be wasted. Advance decisions should be made on what to deliver on a platform and what to deliver synchronously, and to understand that the online student has different needs [in terms of] encouragement, collaboration, and engagement” (M. Younes, Founder of Beyond Borders Consulting, personal communication, November 05, 2021).

2.2.6 Knowledge and Skills to consider while developing Teacher Professional Development Programs

Burns and Lawrie (2015) offer seven key recommendations to improve training for teachers in fragile environments:

- Focus on the teachers as professionals, learners, and individuals
- Develop, apply, measure, and institutionalize standards for teacher professional development
- Create professional development opportunities that promote teacher collaboration
- Provide teachers with ongoing support
- Invest in high-quality teacher educators
- Build instructional leadership at all levels of the education system
- Use ICT to provide access to content, professional development, and professional learning communities

The literature reviewed (i.e., Dahya, 2016; Dreesen et al., 2020, p. 20; Mueenuddin et al., December 2021) and the experts and practitioners consulted for this report recommend the following solutions for the above challenges:

- Ensure quality Professional Development, namely:
 - Ensure its availability and continuity and provide follow-up
 - Offer institutional support
 - Provide incentives to complete the Professional Development, and recognize completion
 - Provide quality content that is focused on curation, facilitation, presentation, assessment, and feedback
- Build networks of support:
 - Among peers. Experts and practitioners stress the effectiveness of peer support, which education institutions must facilitate to help teachers start the conversation.
 - For psycho-social issues
 - With parents as critical key partners with teachers. Parental involvement plays an equalizing role and mitigates some limitations of remote learning. As countries transition to a more consistent, blended learning model, it will be necessary to provide guidance to parents and equip them with the tools they need to support their children (World Bank, 2021).

- Encourage extended family, neighbors, and community members to be key partners with parents. Drawing from work they did in Africa, an interviewee pointed out that parental interest can both support children’s learning and lessen each household’s burden of responsibility for their children’s learning. This interviewee described how parents rotated the responsibility for DE during COVID-19, each taking a day to supervise the learning of multiple children, which freed the others to work or take care of home responsibilities on the days they did not host. In some contexts, the other family members live in the same house or nearby; their participation can be integral to the children’s education and thus should be encouraged (A. Twinomugisha, World Bank, personal communication, November 10, 2021).
- By encouraging teachers to join local, national, and international communities of practice
- Ensure pedagogical support:
 - To develop digital, paper-based, and pedagogical tools to teach effectively in both remote and in-person settings (World Bank 2021)
 - From education institution or ministries by focusing on offering teachers’ assistance rather than on conducting performance evaluations
 - By NGOs, INGOs, ministries, and other institutions creating opportunities for teachers to practice their learning with their peers and school leaders, especially new or volunteering teachers who must be supported in their efforts to demonstrate efficacy. This includes coaching and mentoring that center on their foundational strengths and helps them gain new skills (NYU Steinhardt School of Culture, Education, and Human Development, 2021).
 - By training trainers and replicating teacher Professional Development efforts for local teachers
 - For gaining soft skills, such as confidence, persistence, and resilience, especially for managing situations where online tools do not work
 - For emotional adaptability, including teachers’ self-efficacy, belief in what they are doing, and their willingness to take risks, fail publicly, and learn from mistakes
 - To apply key pedagogical focus areas such as social-emotional learning, psychosocial skills, asset-based pedagogies, project-based learning, and differentiation of instruction
- Promote learning results for all children:
 - Gleason (2020) mentions that evidence collected from schools of varying sizes across 92 countries shows the importance of teachers’ professional development in ensuring the full inclusion of children with disabilities: “[Teacher professional development] is worth investing in because it can make a real difference in learning outcomes for children—even children with the most complex learning needs.”

Based on Gleason (2020) research, the following practices emerged as effective in promoting learning results for all children, especially those with multiple disabilities, who have the most complex learning needs and depend on skilled teachers:

- Close gaps in access to education by enabling teachers to meet children where they are, including children with disabilities. This sometimes means supporting teachers in non-school settings.
- Provide coaching and mentoring for teachers that allows for necessary and timely adjustments to learning programs. Mentoring and coaching are not one-size-fits-all, and to be effective they must support teachers' individual development. This means revisiting and updating the skills teachers have learned in past trainings and responding to their current learning needs.
- Help teachers develop a support network of peers and supervisors who will help them tackle future challenges.
- Provide post-training consultations and ongoing follow-up through on-site visits and distance support.
- Train local teachers to become the leaders of capacity building initiatives.
- Mobilize the local community to support teachers, who are only part of the learning team. Teaching and learning are community and family based, and the learning team includes families, school and community leaders, health professionals, and other community members who can stand with teachers to ensure holistic learning for children.

It is worth noting that most teachers using DE in emergencies work in non-formal settings, which one INEE DERG member says provide more flexibility for teachers in terms of Professional Development opportunities:

“Non-formal settings are often more encouraging and open to non-traditional approaches and more progressive in mindset because of outside influences and less bureaucracy. In contrast, formal educational institutions are often more rigid and teachers in formal settings may have less experience being agile. This is compounded by a lack of support and encouragement to go outside of what they have learned.” (M. Younes, Founder of Beyond Borders Consulting, INEE DERG member, personal communication, November 5, 2021)

Knowledge and Skills for Online Distance Education

For online learning, the following knowledge and skills are recommended:

- Teachers delivering online DE should get opportunities to:
 - Practice using technology tools, such as Canvas, Zoom, Moodle
 - Understand the capability and benefits of a particular tool (e.g., a computer), which can be complex and have many applications and available software
 - Understand the various applications, their specific benefits for learning, and the challenges of using them

- Identify which pedagogical methodologies will be used, the recommended ways to mix them, and when/how a technology tool is complementary to the methodologies, for example:
 - When should direct instruction be used? When should cognitive models be used that enable students to learn together (e.g., by socializing, group work)? Inductive approaches? Deductive approaches?
 - How can the technology be used as a tool for traditional teaching methods? For more complex methods, like those that are student-centered?
 - How should activities be designed for use with a particular technology?
 - How does the particular technology need to be properly installed to deliver optimum output?
- Teachers must be supported in developing the required skills, including:
 - Fundamentals of teaching
 - Understanding and elaborating learning objectives
 - Online pedagogy
 - How to select learning modalities (i.e., delivery channels)
 - How to select and curate content for online teaching
 - How to move a face-to-face course online. As described by a member “You really have to think about how to translate an activity to a distance format, from the specific instructions to answering students’ questions. Lessons transferred via distance [education] is very challenging. Even translating a syllabus is challenging” (A. Oswald, NRC, personal communication, November 2, 2021).
 - How to condense contents. One member stated that “EiE is similar to education in a pandemic, as there is no time for preparation; therefore, you must prioritize what’s important in terms of areas to focus on and time allotment, especially in going from one medium to a second medium” (A. Oswald, NRC, INEE DERG personal communication, November 2, 2021).
 - How to assess learning. “Teachers said the number one skill they need training in is online assessment, completely a ‘black spot’ when dealing with DE” (M. Younes, Founder of Beyond Borders Consulting, INEE member, personal communication, November 5, 2021).
 - How to successfully facilitate and engage learners, especially in low-resource settings, who often have already lost three to five years of education and who face linguistic barriers, as is the case many of [Amala Education](#)’s students (E. Karamichail, Education Coordinator and Greece Programme Coordinator, Amala Education, personal communication, November 11, 2021).
 - How to adapt Edtech software’s for safety and privacy
 - Communication is clearly necessary for teaching but, as a member affirmed, also for keeping in contact with students and parents. She pointed out that this includes skills that use a variety of online learning tools and social media (e.g., WhatsApp, Facebook) to keep parents up to date (A. Oswald, NRC, INEE DERG, personal communication, November 2, 2021).
 - How to maintain discipline among students in an online teaching environment.

Knowledge and Skills for Offline Distance Education

The following knowledge and skills are recommended for those who teach offline DE:

- How to select the learning channel or modality. For example, one to one, providing packets of paper learning materials to the home, offering feedback, meeting in person in groups of five to ten students
- How to design a micro or “bite-size” learning curriculum that is short and appealing, with clear instructions
- How to provide constructive feedback in person on the day the assignment is given or on an appointed day
- How to provide constructive feedback in a few minutes. One member stated that “teachers should provide students with answers and ways to improve, to maintain with the student an open conversation and two-way dialogue” (M. Younes, Founder of Beyond Borders Consulting, INEE DERG member, personal communication, November 5, 2021).

2.2.7 Conclusion

Teachers’ roles are unchangeable, unlike their tasks, working and living conditions, and social emotional well-being, all of which are affected by emergencies. Additionally, not all who teach in emergencies are professional teachers; they include any individual who assumes teaching tasks, in formal and non-formal settings, as a volunteer or in a paid position. Whatever their background, all who teach via DE in emergencies should have the benefits of continuous pre-service and in-service Teacher Professional Development, coupled with support they need to meet the competency standards (i.e., pedagogical competencies, digital competencies, and social-emotional competencies) of INEE Minimum Standards, as well as national and professional teaching standards.

The Professional Development should enable teachers to create a career pathway, starting with earning teacher certification and micro-credentials, especially teachers who are among the refugees or internally displaced persons they are teaching. Professional Development should offer an opportunity to overcome barriers to teaching, including “often overlooked and complicated attitudinal barriers” some teachers have toward distance learning and about whether teaching is the job they really want.

Evidence collected from researchers, practitioners, and experts recommends ensuring that high-quality Professional Development is offered continuously for all teachers of DE, including the following actions:

- Contextualize Professional Development
- Have skilled professionals deliver Professional Development, in particular people who have been teachers and know how to teach
- Ensure that teachers providing DE in emergencies are supported, motivated, and well prepared for emergencies
- Develop and apply measures and institutionalize standards for teacher professional development
- Build professional and community-based support networks

Teachers delivering online DE should get opportunities to:

- Practice using technology tools, such as Canvas, Zoom, Moodle
- Understand the capability and benefits of a particular tool
- Identify the pedagogical methodologies to be used, the recommended ways of mixing them, and when/how a technology tool is complementary to them

Teachers delivering offline DE should have the following knowledge and skills:

- How to select the learning channel or modality, such as face-to-face, delivering packets of paper learning materials to students' homes, offering feedback, meeting in person in groups of five to ten students
- How to design a micro or "bite-size" learning curriculum that is short and appealing, with clear instructions
- How to provide constructive feedback

Checklist 3: Teacher Professional Development

Phase: READINESS		
Sub-Phase	Task Ideas	Useful Resources
Prepare assessment and analysis tools	<p>Assess the knowledge and skill teachers need, support teachers' ability to create and implement social-emotional teaching approaches</p> <p>Assess teachers' strengths</p> <p>Assess teachers' well-being, worries, concerns, and challenges faced</p> <p>Assess parental support</p> <p>Assess technology and infrastructure</p> <p>Assess teachers' and students' access to technology, including:</p> <ul style="list-style-type: none"> • Who has control of the technology? • What is the most popular technology in use in the context? <p>Assess the logistical support currently available and what is actually required</p> <p>Map potential stakeholders and community capacities</p> <p>Cross-reference assessment and analysis tools with understanding of what is required for teaching</p>	<p>Promising Practices in Teacher Management, Professional Development, and Wellbeing (INEE, 2019)</p> <p>Where it's needed most: Quality professional development for all teachers (INEE, 2015)</p> <p>Education in emergencies training toolkit (UNICEF and Save the Children, 2009)</p>

Phase:
PLANNING

Sub-Phase	Task Ideas	Useful Resources
<p>Ensure that planned Professional Development helps teachers design their DE content, with assessments, to utilize technology.</p> <p>This means understanding certain benefits of a technology, and the challenges.</p> <p>Verify that Teacher Professional Development is aligned with quality standards</p> <p>Provide Teacher Professional Development in the local language</p> <p>Ensure that Teacher Professional Development is based on a needs assessment of teachers</p> <p>Check that it is participatory, practical, and actionable for teaching and assessments</p>	<p>Mobilize teachers and volunteers</p> <p>Apply the assessment tools in a holistic manner</p> <p>Design teacher training in collaboration with education authorities, other partners, and teachers, including a teacher-training strategy, with curriculum, and teacher guides and/or the materials to be used</p> <p>To ensure a consistent approach to teacher qualifications, training, incentives, support, and monitoring, create selection criteria, an incentive structure, and certification processes, in collaboration, with education authorities and partners</p>	<p><u>Toolkit for designing a comprehensive distance learning strategy</u> (USAID, 2019)</p>
<p>Confirm the appropriate credentialing for teacher Professional Development</p>	<p>Advocate to have teacher training validated and certified by the relevant education authorities or universities</p> <p>Create a code of conduct for teachers</p>	
<p>Ensure that teachers have the appropriate guides/manuals/materials</p>	<p>Prepare and share electronic and printed guides/manuals/materials for teachers to assist them in their responsibilities. This includes, for example, pedagogical manuals, education technology manuals, and psychosocial skills manuals</p>	
<p>Ensure financial and logistical support</p>	<p>Set a budget for the Teacher Professional Development</p> <p>Identify potential financial resources</p>	

Phase:
IMPLEMENTING

Sub-Phase	Task Ideas	Useful Resources
<p>Ensure that training contributes to both quality education and teachers' career advancement</p>	<p>Suggested competencies include:</p> <p>Pedagogical competencies, such as traditional versus learner-centered methods; ways to apply the pedagogical focus areas (i.e., social-emotional learning, psychosocial skills, asset-based pedagogies, project-based learning, and the differentiation of instruction); ways to apply digital pedagogies, including</p> <ul style="list-style-type: none"> • Fundamentals of teaching • Understanding and elaborating learning objectives • Pedagogy of online teaching • Soft skills (e.g., confidence, persistence, resilience) • Emotional adaptation (e.g., self-efficacy) <p>Digital competencies for online DE include how to:</p> <ul style="list-style-type: none"> • Select learning modalities (i.e., delivery channels) • Select and curate content for online teaching • Move a course online • Condense contents • Assess learning • Manage people online <p>Specific competencies for offline learning include how to:</p> <ul style="list-style-type: none"> • Select the learning modality (e.g., face-to-face, at home, small groups of students) • Design micro-learning • Condense the curriculum so it is short and appealing, with clear instructions • Provide constructive feedback in person, on the day the work is assigned or an appointed day • Provide constructive feedback in a few minutes 	<p><u>How to use content curation for education: Infographic</u> (elink.io)</p> <p><u>An asset-based approach to education: What it is and why it matters</u> (NYU Steinhardt School, 2018)</p> <p><u>Developing digital pedagogy skills and knowledge</u> (Teacher Magazine, 2020)</p> <p><u>What is digital pedagogy and why do we need one?</u> In <i>Teaching with ICT: Digital pedagogies for collaboration & creativity</i> (J. Howell, 2013)</p> <p><u>Content curation: Tools and strategies for teachers</u> (Resilient Educator)</p> <p><u>Technology teaching and learning research, experience, & global lessons learned</u> (Mary Burns, 2011)</p>

<p>Ensure that Teacher Professional Development is ongoing</p> <p>Provide training follow-up</p> <p>Think CORE: coaching, observing, reflecting, engaging</p> <p>Build communities of practice or encourage teachers to join one</p>	<p>Practice pedagogical learning, including content/lesson design and assessment, content curation, asset-based management, and providing an interactive presence</p> <p>Practice the use of technology in which capacity is built and that will be used in teaching</p>	<p><u>Digital Pedagogy - A Guide for Librarians, Faculty, and Students</u> (University of Toronto Libraries, 2021)</p> <p><u>Content curation: A guide to content curation for learning and development (L&D)</u> (Sprout Labs)</p> <p><u>Being “present” in your online course</u> (Indiana University)</p> <p><u>Sustainable learning framework</u> (Carey Institute)</p> <p><u>Education in emergencies training toolkit</u> (UNICEF and Save the Children, 2009)</p>
<p>Facilitate teachers' networking and communities of practice</p>	<p>Help teachers develop a support network of peers and supervisors</p> <p>Ensure continuous and on-demand support by establishing peer support groups through the communication channels used by teachers, such as WhatsApp</p> <p>Encourage teachers to collaborate and delegate tasks</p> <p>Praise teacher practices</p> <p>Ensure adaptations are based on lessons learned and practiced</p> <p>Ensure post-training consultations and follow-up, through on-site visits and ongoing distance support</p> <p>Train local teacher mentors to become the leaders who replace donor-supported training</p>	

Phase:
TRANSITION TO BLENDED OR FACE-TO-FACE LEARNING

Sub-Phase	Task Ideas	Useful Resources
Adapt and divide learning between face-to-face and online	<p>Review and adapt your curriculum for the transition</p> <p>Review lessons plans, pacing, and time management with teachers</p> <p>Chose the teaching delivery modality based on teacher feedback and students' needs</p>	
Ensure the well- being of both teachers and learners	Provide psychosocial support for both teachers and learners	
Provide financial and logistical support	<p>Set a budget to provide additional support for teachers and learners</p> <p>Identify potential financial resources</p>	

Phase:
MONITORING AND EVALUATING

Sub-Phase	Task Ideas	Useful Resources
<p>Review progress and quality</p> <p>Evaluate impact</p> <p>Adapt Teacher Professional Development programs based on M&E data findings.</p>	<p>Set SMART indicators against the expected results from the Teacher Professional Development</p> <p>Ensure that Professional Development includes formative assessment to allow for adjustments of DE interventions.</p> <p>Ensure that Teacher Professional Development includes appraisal systems and/or professional objectives, with indicators of what teachers will be evaluated on</p>	

2.3 ENABLING POLICIES FOR DISTANCE EDUCATION AND MEETING INEE MINIMUM STANDARDS DOMAIN FIVE: EDUCATION POLICY

2.3.1 Targeted Users and Objectives

The main audience of this section is:

- Authorities developing education policy
- Education policy actors
- Actors influencing education policy

A sub-category of audience includes formal and informal education institutions.

The objectives of this section are to:

- Present recommendations for the quality criteria and components of policy for DE in emergencies
- Present the challenges of and recommendations for enabling a DE policy

2.3.2 Potential Components of Distance Education Policy

To ensure the continuity of curriculum-based study and learning for all, government agencies, often in collaboration with international organizations, private-sector partners, and civil society organizations, must develop and implement policies that enable the delivery of education through a mix of offline and online channels. These policies must also recognize and support teachers' efforts.

The immediate policy response during the COVID-19 school closures aimed to ensure the continuation of curriculum-based learning through a range of remote learning modalities, including online, TV and radio, and paper-based take-home learning materials. These policies also strengthened support for teachers, including adjusting their assessment and examination policies. Specific measures were put in place to ensure the inclusion of populations at risk of being excluded from distance learning platforms, and to support student well-being (UNESCO et al., 2021).

According to UNESCO et al. (2021), online modalities and TV were the modalities used most often. They were offered in 90% and 87% of countries, respectively, followed by paper-based take-home materials (85%) and radio-based remote learning (61%).

According to UNICEF's (2020) Remote Learning COVID-19 Response Decision Tree, printed or paper-based solutions (e.g., books, worksheets, activity booklets) remain a foundational approach for delivering effective, low-cost remote learning to children. Paper-based learning materials can be the primary means of providing remote learning in places where there is little access to the internet, or a supplementary resource used in combination with TV, radio, and other digital interventions.

The experts and practitioners consulted for this report noted an absence of national policies on DE and related online technology. They noted further that, even where DE policy existed, it was not implemented. This was affirmed by an interviewee, who spoke about a country hosting refugees: "Often there is no policy on technology in the country for citizens, and much less for refugees" (C. Groeneveld, EdTech Hub, personal communication, November 5, 2021). They explained that countries hosting refugees frequently do not have policy related to emergencies because they are reluctant to host refugees. In this interviewee's opinion, if a policy on DE does exist, implementers should be trained to operationalize on war footing in case of crises.

INEE DERG considers the primary components of online DE policy to include:

- The necessary infrastructure for online DE (i.e., access to and availability of stable and sufficient internet and electricity sources)
- Alignment with national education priorities (e.g., credentialing, development, and implementation). However, one member fears that this is problematic because the

priority of a lot of governments is not to acknowledge the certificates of refugees or to provide new accreditation, which hinders the positive potential of DE for refugees and internally displaced populations (M. Younes, Founder of Beyond Borders Consulting, INEE DERG, personal communication, November 5, 2021).

- Delivery channels or modalities, and reach
- Quality of learning
- Ways student groups can access resources
- A budget and a funding commitment
- Identification of the authority/ies responsible for implementation
- A plan for the various elements of the education system (i.e., teacher training, evaluation, learning resources) that support distance learning

Box 8: Definitions of Certification and Accreditation

Certification is defined as a mark of quality that publicly attests to the value of a learning program. Certification might be a formal certificate that recognizes a student's achievement at the end of examinations.

Accreditation is similar to certification. It may be an education ministry's recognition or endorsement of a program official. Accreditation applies more to the status of a learning program, whereas certification usually mean proof of a learner's successful completion of a program.

Source: Kirk, 2009

2.3.3 Quality Criteria of Distance Education Policy

Some of the experts and practitioners consulted maintained that DE policy should go beyond the suggested components to include standards on quality education, learning, safety, and inclusion.

Inclusion policy should provide access to DE for learners with disabilities and ensure that the channels used to deliver learning are accessible for all learners. According to UNESCO's 2020 Global Education Monitoring Report: Inclusion and Education—All Means All, fewer than 10% of the world's countries have laws to ensure full inclusion in education of any type. This means that most countries do not mandate requirements of quality education—education for all in synchronous education—which makes it unlikely that they will provide the more challenging format of distance learning.

UNESCO "2021/2 Global Education Monitoring Report Summary Non-state actors in education: Who chooses? Who loses?" states that governments should hold education providers accountable for complying with standards on quality, inputs, safety, and inclusion, and most countries do in fact apply sanctions, close schools, or withdraw a license if a non-state school does not comply with regulations.

2.3.4 Challenges of Enabling Distance Education Policy

The challenges of providing quality education for refugees living in emergencies impedes the development of DE policy. These challenges include but are not limited to:

Lack of accreditation

According to a UNICEF (2020) examination of remote learning policies during COVID-19, limited reach resulted from:

- A limited focus on pre-primary distance education. Just 60% of education ministries developed remote learning policies for pre-primary education.
- Difficulty reaching all children across the globe. The percentage of students who could not be reached by digital and broadcast remote learning policies was highest in sub-Saharan Africa. At least 48% of students in West and Central Africa and 49% in Eastern and Southern Africa could not be reached.
- Differences within and between countries. Digital and broadcast remote learning coverage in low- and middle-income countries varies significantly, from almost 0% in some places to 100% in others.
- Rurality and poverty. Around the world, more than 70% of students who cannot be reached by DE live in rural areas, and more than three-quarters of them are from the poorest 40% of households.

As may be expected, UNICEF (2020) concluded that more children can be reached in wealthy countries than in poor countries. A greater number of students in wealthier and/or urban populations can be reached.

The experts and practitioners consulted for this report noted additional challenges to providing DE policies:

- Some national and provincial governments' lack of capacity to develop, implement, and monitor distance learning in a short period of time.
- Some governments are already struggling to provide traditional education and are likely to find it overwhelming to pivot to a new modality for educating children.
- Some national and provincial ministries of education do not consider distance learning an acceptable alternative to the traditional face-to-face approach.
- Many countries lack any policy on educating refugees. One interviewee commented that "we don't need policies on DE. We need a policy on getting education to refugees; however, policies for refugee education are a step too far" (C. Groeneveld, EdTech Hub, personal communication, November 5, 2021).
- Providing the financial resources to implement DE policy, which is very challenging particularly when it competes with funding for the traditional face-to-face approach to education.
- DE increases protection risks. Learners become more exposed when the safe environment schools provide is removed and relying on digital tools carries the potential for misuse or online abuse. These risks increase in the absence of policies related to online and digital safety

2.3.5 Enabling Distance Education Policy in Practice

This section presents major recommendations inferred from practices found in the literature reviewed and/or were shared by the experts and practitioners consulted for this report.

Seek effectiveness in DE policy and modalities

Develop and operationalize policy on the integration of digital learning in education and provide sufficient regular funding to prepare for future crises. As stated in UNESCO et al. (2021), “The effectiveness of the mitigation tools applied often depends on the local context and baseline learning levels (i.e., the level of learning poverty prior to COVID-19 disruptions).”

Understand the impact crises and emergencies have on children and adhere to ethical guidelines and “do no harm” approaches when developing implementation guidelines.

Apply measures to expand the reach of DE modalities

Dreesen et al. (2020) recommends the following:

- Expand reach by using a combination of delivery channels, both digital and non-digital (e.g., TV, radio, and take-home packages of learning materials)
- Engage parents and the community in the learning response
- Strengthen support for teachers, facilitators, and parents who deliver remote learning
- Provide access to quality content, whether the curriculum or other resources
- Provide opportunities for teachers and learners to build the skill sets needed, and curate content for both teachers and learners
- Ensure that parents/caregivers engaged in at-home learning receive support in the form of:
 - supplementary materials
 - informative webinars
 - call-in helplines to get answers to questions
 - tips for children’s online safety
- Confirm that broadband policies ensure that every education institution (schools, universities, and government departments) has affordable connectivity to meet the need for running devices.
- Improve the monitoring of reach and quality, and gather feedback for evidence-based decision-making

It was noted that careful consideration of whom the DE measures would actually reach was often missing. Mixed approaches, such as printed resources in combination with various technologies and teacher/community volunteer support, would provide some degree of ongoing, in-person connection and thus ensure some degree of reach.

Operationalize a combination of inclusive learning modalities

This includes offering a mix between offline and online education, including fully remote learning or blended learning (UNESCO et al., 2021).

- Ensure that lessons are accessible for learners with disabilities. This can be achieved through low-tech delivery channels such as TV, which is used in 75% of countries (e.g., lessons could be offered in sign language (e.g., Morocco, Malawi, Uzbekistan, Armenia, Kazakhstan) and by ensuring that teachers have access to assistive technology (e.g., Moroccan Sign Language Clip and Create software) (GEM Report, 2021; Kumwenda, n.d.). For example, the Moroccan government has made accessibility and sign language a priority under their national MOOC development, which is part of the National Reading Program. The MOOC developed for pre- and in-service teacher training enables teachers to gain a better understanding of national curriculum literacy reforms.
- Use take-home learning packets to circumvent the lack of electricity
- Encourage teachers to make home visits

Adopt a variety of mechanisms to mitigate potential learning losses

- Prioritize certain areas of the curriculum and adjustments to the school calendar. OECD analysis suggests that, when countries prioritized certain curriculum areas or skills when schools reopened after Covid-19 they were most likely to choose reading, writing, and literature as the priority subjects and, mathematics to a lesser extent (OECD, 2021, in UNESCO et al., 2021)
- In order to help students, catch up once they return to school and to tackle the learning crisis that preceded the COVID-19 school closures, revise national regulations on instruction time and curriculum content, introduce targeted remedial catch-up, and prioritize the remedial learning curriculum
- Assess learning losses to plan for targeted support
- Adjust professional support for teachers
- Modify examination schedules
- Subsidize access to technology for students and teachers (UNESCO et al., 2021)

Measure learning losses

There is a dearth of evidence on learning losses pre-, during, and post-COVID-19 in low-income settings. Standardized student assessments can help measure, track, and compare learning losses. However, in 2020, only a little more than one-third of the world's countries reported having taken steps to assess students in a standardized way, or to have measured learning losses at the national or sub-national level in either primary or lower secondary grades.

Offer refugees low- or no-cost blended study opportunities

For more information, see [The Global Refugee Forum Education Co-Sponsorship Alliance Brief](#).

Develop innovative policies and financing protocols for sustainable, adequate, and equitable teacher recruitment, remuneration, and working conditions.

Integrate qualified refugee teachers into the host country national education systems

Adopt harmonized approaches for integrating qualified refugee teachers into national system schools, including through the recognition and accreditation of their qualifications (The Global Refugee Forum Education Co-Sponsorship Alliance, 2019).

Properly assess, accredit, validate, and certify both students and teachers

Procedures and mechanisms should be in place for recognizing education completed prior to and during displacement, and, as necessary, for opening or amplifying preparatory programs. Without recognition and validation of their prior learning, students are prevented from moving to higher education levels or using their education qualifications to pursue employment opportunities (The Global Refugee Forum Education Co-Sponsorship Alliance, 2019).

Recommendations include:

- Apply mechanisms to assess and certify student learning, and that allow for key decisions on students' progression. As schools re-open for in-person instruction after the closures due to Covid-19, it will be important to understand students' levels of knowledge and skills as they compare to expected learning levels. To this end, it is necessary to consider how to adjust learning assessment and examination systems most effectively and fairly in the context of learning loss. At present, many education systems rely on national examinations to decide which students' progress to the next level (UNESCO et al., 2021).
- Facilitate teacher accreditation and certification for non-qualified local teachers and refugees in regions where teacher recruitment and retention are challenging (The Global Refugee Forum Education Co-Sponsorship Alliance, 2019).

Support the return to and recovery of face-to-face learning

- Partner with other actors to build capacity and accreditation and to translate traditional courses to blended delivery (The Global Refugee Forum Education Co-Sponsorship Alliance, 2019).
- Support the return of learners at the pre-primary level. Doing so will not only ameliorate the long-term impact of the COVID-19 crisis on the youngest learners, it also will contribute to education systems' resilience in future crises (UNESCO et al., June 2021).
- Support girls' return to school, including in low-income countries, with special attention to adolescent girls who are at great risk of dropping out following prolonged school closures.
- Encourage families to allow girls to continue learning remotely, rather than increasing their household duties (e.g., Ghana) (Innovations for Policy Action, n.d.).

Collaborate and coordinate education governance at different levels and with other sectors

Multi-sector measures are often proven to be notably more effective. For example, it is essential to address the multi-dimensional effects of school closures by working with other actor from different sectors, such as health (UNESCO et al., 2021). The experts and practitioners consulted for this report, as well as the World Bank (2021), are convinced that leveraging collaboration between ministries of education and other stakeholders in the education ecosystem would improve the effectiveness of education. This collaboration could be enhanced by the following recommended actions:

- Burns (2012) recommends forming an agreement among all educational stakeholders at the national level to offer a shared vision of education that brings “coherence to a program, serving as the organizing framework within which all goals, policies, actions, infrastructure, and activities can be developed, and against which results can be evaluated” (p. 91).
- Increase children’s access to digital content where possible by negotiating zero-rating agreements (e.g., Rwanda and the smartphone network Airtel Rwanda; South Africa and telecom provider Telkom (Airtel Rwanda, 2020) or partnering with local technology companies to develop national Edtech solutions (e.g., Jordan and Mawdoo3 complemented by White Space technology).

Adopt blended approaches for learning and teacher Professional Development

According to Ashlee et al. (2020), the literature strongly points to blended approaches that combine technological and human support to complement the strengths and weaknesses of each. Blended learning should incorporate face-to-face, in-person teaching along with digital materials, as is done, for example, by UNESCO in Lebanon with the Raspberry Pi for Learning Initiative. Most of the literature agrees on the importance of teachers in the learning process, and that technology alone is not enough to ensure good learning outcomes.

Consider equitable application when financing education policies and programs

This is needed in both regular and emergency budget allocations to ensure that essential funds reach disadvantaged groups and provide inclusive educational opportunities for all.

Additional investment is critical to ensure blended learning, support for vulnerable students, teacher training, and safe school reopening (UNESCO et al., June 2021).

Provide mental and psychosocial support to ensure better mental health

INEE Minimum Standards Domain 2, Standard 2: Protection and Well-being states that learning environments are secure and safe and promote the protection and the psychosocial well-being of learners, teachers, and other education personnel. However, UNESCO et al. (June 2021) recently concluded that there is “a dire need for other interventions, such as psychosocial support to ensure better mental health.” While 78% of countries provided professional psychosocial and emotional support for teachers. (UNESCO et al., 2021), these research findings reveal that gaps still exist in providing such support for

both learners and teachers. This includes figures showing that providing psychosocial and mental health support for learners is much less frequently reported by low-income countries than by middle- and high-income countries.

Integrate EdTech into national DE policies

The preparedness plan for emergencies in every country should include, first, a DE strategy and, second, different modalities, including educational technology planning, should be based on resources and needs.

Promote EdTech that strengthens support for teachers, parents, and caregivers in their roles in DE

Countries are engaging and supporting caregivers in providing children with psychosocial support and encouraging their safe use of technology. Several countries are using various simple tools (e.g., SMS, U-Report, messaging apps) to gather quick feedback from parents and caregivers to improve remote learning, while some countries monitor the use of digital platforms (Dreesen et al., 2020, p. 10).

Strengthen digital literacy among teachers and students, as mentioned in the contexts of Rwanda and South Africa. This was seen as an important part of preparedness for future crises, which could require extensive use of online and digital learning resources (Mueenuddin et al., 2021).

Dreesen et al. (2020) highlights the following lessons learned:

- **Ensure safe, effective education delivery.** A quick response would be possible if accessible digital and media resources based on the national curriculum were produced. This also would promote a quicker return to normalcy and enrich learning opportunities for children in and out of school.
- **Invest in infrastructure in remote and rural areas to reach marginalized children.** For example, [Generation Unlimited](#), a global multi-sectoral partnership, aims to increase education, training, and employment offerings for individuals ages 10 to 24, while the [Giga](#) initiative aims to connect all schools globe-wide to the internet so that students have access to the information and options it can offer.
- **Promote a culture of research to share challenges, lessons learned, and recommended practices.**
- **Set Edtech principles under education policy.** One example is [India's national policy](#).

Propose recommendations for policy-level reforms in education, including action plans to integrate these reforms

This requires the involvement of all development and implementation stakeholders; requires content knowledge, assessment knowledge, communication skills, contextual understanding, and teachers themselves; and takes the complexity of teaching into account.

Advocate specifically for DE policies

Two INEE members argued that efforts should be made to “influence policies at a national level and require a systems-level approach to educational technology that is manifested through the national ministry of education” (L. Olsen, Norad, INEE DERG, personal communication, November 9, 2021) because “if a ministry of education is telling everyone what they need to do, they are going to do it. So, we must start at the policy level. INEE and all stakeholders must get the eyes and ears of policymakers” (M. Burns, Senior Technology Specialist, Education Development Center, INEE DERG, personal communication, November 5, 2021).

Advocacy efforts should raise the following matters:

- Policy cannot rely on a teacher inspection system over a teacher support system.
- Policy should support teachers in adapting to the changes in their roles.
- One member, “acknowledging the role of infrastructure and connection to DE in other sectors such as health and nutrition,” suggested broadening the scope of DE to include other sectors: “Efforts should aim at mobilizing support from community members on these other issues” (L. Olsen, Norad, INEE DERG personal communication, November 9, 2021).
- To achieve relevance and quality when developing policies, it is important to apply participatory approaches that include teachers’ unions, organizations that support people with disabilities, student councils, and children.
- Education Ministries should provide the infrastructure needed for distance learning. National policies must define and support a policy for teaching in situations of displacement and emergency.

In addition to the above following aspects related to Teacher Professional Development and decision making also need to be considered.

- Continuous quality Teacher Professional Development for teachers, both pre-service and in-service, that includes professional development pathways and support
- Determining whether the decision-making level for DE in emergencies should be central, local, or both.

2.3.6 Conclusion

Developing DE policy is a collaborative process between all concerned stakeholders, including government agencies, international organizations, private-sector partners, and civil society organizations. DE policies should enable the delivery of education remotely through a mix of offline and online modalities. This will help to ensure the continuity of curriculum-based study and learning for all, with recognition of teachers' efforts and support. DE policy should include standards on quality education, learning, safety, and inclusion.

However, there is often no DE or EdTech policy for countries' citizens, much less for refugees.

Evidence collected from researchers, practitioners, and experts recommends enabling quality, effective, and sustainable DE policy through the following actions:

- Understand the impact of crises and emergencies on children, adhere to ethical guidelines and “do no harm” approaches
- Apply measures to expand the reach of DE modalities
- Operationalize a combination of inclusive learning modalities
- Adopt a variety of mechanisms to mitigate potential learning losses
- Seek and provide support to monitor the transition from one learning level to a higher one
- Offer low- or no-cost blended study opportunities for refugees
- Ensure innovative policies and financing protocols for sustainable, adequate, and equitable teacher recruitment, remuneration, and working conditions
- Integrate qualified refugee teachers into national education systems
- Adopt proper assessment, accreditation, validation, and certification for both students and teachers
- Support the return to and recovery of face-to-face learning
- Consider equity when financing education policies and programs
- Provide mental health and psychosocial support
- Set the decision-making level for DE
- Integrate EdTech into national DE policies
- Promote EdTech that strengthens support for teachers, parents, and caregivers in their DE roles
- Ensure continuous quality Professional Development for teachers, pre-service and in-service, including professional development pathways and support

Education Ministries in particular should provide the necessary infrastructure for distance learning and should define and support a policy for learning and teaching in situations of displacement and emergency.

Checklist 4: Enabling Policies

Phase: READINESS		
Sub-Phase	Task Ideas	Useful Resources
Elaborate a shared vision for education at the national level and integrate DE into it	<p>Collaborate with all stakeholders to build a shared vision</p> <p>Agree with educational stakeholders on ways to integrate DE into the national educational policy</p> <p>Align national and school goals and expectations around the use of the agreed upon DE modality for teaching and learning</p>	A separate tip sheet in Annex 5 provides guidance on the application of different modalities (i.e., high-tech, low-to mid-tech, no-tech, or offline)
Structure your intervention	Adopt a process to structure your DE intervention whether the suggested circular process in this paper or any other suitable process	Annex 3: Resources to Structure a Distance Education Intervention
Assess	<p>Prepare tools to assess the main components of DE policy:</p> <ul style="list-style-type: none"> • Necessary infrastructure for online DE (access to and availability of internet and electricity) • Alignment with national education priorities (credentialing, teacher professional development, support, and implementation) • Mode • Reach • Quality of learning • Ways for different student groups to access resources • Provision for learners with disabilities • Potential delivery channels that fit the accessibility and reach criteria <p>Prior to an emergency, assess potential policies and mechanisms for teacher recruitment, compensation, and certification</p>	
	<p>Assess ministry of education policies on validating the training of education personnel during emergencies and/or for refugees hosted in the country, as well as mechanisms for additional training opportunities and certification post-emergency, including for teachers from refugee communities</p> <p>Assess the potential integration of displaced/refugee students or their reintegration into education systems</p> <p>Assess potential guidance related to the equivalency of curricula, programs, and examinations</p>	

Set national standards	Set national performance and quality standards, including for DE, education technology, standards for pedagogy, staff member and teacher trainings, quality assurance, governance, funding, and institutional capacity competencies	
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**Phase:
PLANNING**

Sub-Phase	Task Ideas	Useful Resources
Provide the financial resources needed to implement the different components	Set a budget for the national policy Ensure that financial resources, human resources, and institutional resources are available and ready to implement	
Run the necessary assessments and plan accordingly	Apply assessments and develop potential action plans	<u>Methods of teaching with an online focus in Teaching in a Digital Age</u> (Anthony William Bates)
Ensure that competencies and standards are met	Ensure institutional competencies, specifically the competencies for ensuring quality education does not differentiate between DE and face-to-face education models. Prepare content to be used by teachers and learners and modes of teaching Plan how teachers and students will access content Plan ways to support teachers and learners in DE	<u>Minimum Standards for Education: Preparedness, response, recovery</u> (INEE, 2010) <u>Delivering distance learning in emergencies</u> (USAID, 2020) <u>Technology teaching and learning research, experience, & global lessons learned</u> (Mary Burns, 2011)
Plan for a motivational human resources policy, especially for teachers	Plan for motivational incentives to apply DE	
Design the proper curriculum for the chosen DE modality		

Phase:
IMPLEMENTING

Sub-Phase	Task Ideas	Useful Resources
Implement an infrastructure components policy		
Implement policies on teaching and learning in a way that ensures their validity and acceptance in both host and neighboring countries	<p>Build strong leadership in education institutions</p> <p>Provide teachers with various types of high-quality professional development</p> <p>Implement policies that ensure the accreditation and certification of learning achieved by learners in emergencies, including IDP and refugee children</p> <p>Implement policies that ensure the accreditation of education staff trainings, including teacher training</p> <p>Provide teachers with ongoing support</p>	
Provide/facilitate opportunities for teachers' continuous learning		
<p>Disseminate guides/materials for stakeholders.</p> <p>Share analytics regarding the progress of implementation and any improvements achieved</p>		
<p>Implement a motivational human resources policy, especially for teachers</p> <p>Incentivize teachers' use of technology to support learner- centered instruction</p>		

Phase:
TRANSITIONING TO BLENDED OR FACE-TO-FACE LEARNING

Sub-Phase	Task Ideas	Useful Resources
Review and adapt	<ul style="list-style-type: none"> Integrate DE modalities into traditional education Support an inclusive return to face-to-face learning 	

Phase:
MONITORING AND EVALUATING

Sub-Phase	Task Ideas	Useful Resources
<ul style="list-style-type: none"> Review progress and quality of teacher evaluation and monitoring systems. Reflect and adapt M&E systems 	<ul style="list-style-type: none"> Ensure that the teacher evaluation system reflects learner-centered instruction, supported by technology, and the integration of technology into teaching modalities Set SMART indicators for the different output, outcome, and impact levels Gather feedback from education institutions, staff members, teachers, students, and parents Analyze national and emergency-specific results, disaggregated by certain data (e.g., region, sex, age, disability, refugee/IDP status, delivery channels used, access, reach) Evaluate the results, especially the level of impact for learning programs. Adapt and adjust policies in response to evidence 	



CONCLUSION

Providing DE in emergencies is complex but possible. The recent rapid evolution of DE during COVID-19 has led to many pilot initiatives, while simultaneously creating a bank of lessons learned, practices, and recommendations for adapting to DE processes and actions that might be applicable during any emergency.

It is recommended that decision-makers at the institutional and national levels, as well as technology innovators, invest in quality, effective, inclusive, and equitable forms of DE to meet context-specific needs. This will enable them to fulfill international commitments, including those focused on human rights and SDG4, INEE Minimum Standards, and the Principles for Digital Development, and to do so in a way that ensures that education will leave no one behind.

Readiness to address the factors that can affect DE as part of an education system would facilitate a rapid education response that is adequate for and relevant to emergencies in their particular contexts. This would include an education system being ready to respond from the national to the local level, including proper policies, standards, principles, capacities, infrastructure, and human and financial resources. These must be accompanied by all stakeholders' willingness to collaborate and engage, including teachers and learners.

DE interventions follow a circular process that starts with readiness, is followed by preparedness and then implementation, and might conclude with a transitional phase that moves to face-to-face or blended learning. Integrating a review and reflection

sub-phase into each of these phases is the key to making necessary and timely adjustments and adaptations.

One of the first tasks in the process is a comprehensive needs assessment that enables the contextualization of DE to suit the real needs of teachers and learners. A relevant response also requires providing quality DE that is conflict-sensitive, gender-sensitive, equitable, and inclusive.

The major factors affecting the quality of education include the competencies and capacities of teachers who, in emergencies, might be any individual who provides teaching services. Teachers' competencies and capacities are central to any DE intervention, which makes Professional Development for teachers critical to ensuring that they receive the proper support, based on context and varying knowledge level. These factors ultimately affect the type of technology to be used with supporting policies and standards in place. Teachers' support and Professional Development are ongoing processes that should include opportunities for practice, that tackle pedagogical and digital competency and social and emotional capacities, based on the professional pathways recognized by national or education institutions.

A system of support for teachers and learners is another key factor in providing quality DE. This support system includes parents, community members, leaders of education institutions, communities of practices, and peers.

Having a common focus on learning outcomes while ensuring the well-being of teachers and learners should characterize both offline and online DE, even though the delivery channels differ. The delivery channel for offline DE is based on printed material and/or digital materials that are pre-loaded on ready-to-use devices, such as charged tablets. Delivery channels for online DE are all technology based and rely on many infrastructural pre-requisites, mainly internet and electricity, and include concerns about access and reach.

Integrating education technology into DE delivery channels is proven to somewhat increase reach and accessibility for the most vulnerable learners, such as those with disabilities and those living in hard-to-reach areas. However, the poor conditions that characterize emergencies call for further guidance and support from education institutions for ensuring necessary adaptations to the DE ecosystem.

Ensuring continuity of education during crises times fulfills the strategic goals of protecting the right to education for all and ensuring that all learners have the opportunity to thrive and develop their full potential.

Although the use of education technologies is not new, there is no unanimous agreement on their effective use in education as either teaching channels or learning tools. Many Edtech initiatives target different users and provide various software, applications, and online platforms. Under these programs various guides, coursework for different subjects, levels, and languages exists. Nevertheless, recommended practice stresses the importance of interaction and active engagement between learners and teachers while using online DE. Therefore, further collaboration between technology innovators and education actors, especially teachers, would facilitate the production of quality contextualized content and a pedagogical focus on education technology that helps to provide an effective quality education for all.

ANNEX 1: KEY TERMS AND DEFINITIONS

TERM	DEFINITION	DEFINITIONS ADAPTED FROM
Accreditation	Accreditation is similar to certification and accords a program official recognition or endorsement – most likely recognition or endorsement by an education ministry. Accreditation applies more to the status of a learning program, whereas certification usually means the provision of proof of successful completion by a learner.	<u>Certification Counts: Recognizing the learning attainments of displaced and refugee children</u> , (Kirk, J. (Ed.), 2009)
Asset-based approach	An asset-based approach focuses on strengths. It views diversity in thought, culture, and traits as positive assets. Teachers and students alike are valued for what they bring to the classroom rather than being characterized by what they may need to work on or lack.	<u>An Asset-Based Approach to Education</u> (NYU Steinhardt School of Culture, Education, and Human Development, 2021)
Blended learning	Any formal education program in which a student learns at least in part through online learning, with some element of student control over time, place, path, and/or pace.	<u>What Blended Learning Is and Isn't</u> . (Blended Learning Universe, 2016)
Certification	A mark of quality that publicly attests the worth of a learning program. Certification might be the provision of a formal certificate recognizing a student's achievement in the end of cycle examinations.	<u>Certification Counts: Recognizing the learning attainments of displaced and refugee children</u> , (Kirk, J. [Ed.], 2009)
Chronic Emergency	A long-term situation of risk and injury to a large proportion of the population that may exist even in the absence of shocks, for example, persistently high levels of acute malnutrition, persistent epidemics, or protracted armed conflict.	<u>OCHA and slow-onset emergencies</u> (OCHA, 2011)
Computer-based Distance Education	A fixed-time, synchronous lesson on computers, usually a computer lab. This is most common in existing institutions that already have access to the necessary devices.	<u>What Is Distance Learning? And Why Is It So Important?</u> (ViewSonic, 2020)

Connectivity for Distance Learning	<p>Online Distance learning is possible across the spectrum of connectivity to an internet network. Connectivity depends mainly on the provision of internet through a local network, the level of access of users whether learners or teachers to the internet, as well as on the level of supported connectivity by the used technology tool as channel for Distance Learning. The status of connectivity in each context may vary between the following:</p> <ul style="list-style-type: none"> • Stable and continuous internet access using high tech tools such as a smartphone, laptop, tablet, or other smart device • Limited or no internet access: short durations of internet access is usually accompanied by using solutions which work with limited or no internet access. These solutions usually are mid-tech ones and require basic devices for example, devices enabling SMS to download files or answer emails • Connectivity through signals received by television and radio as low-tech tools • No connectivity or no access to an internet network. Usually, a distance learning without connectivity do not require the access of learners and teachers to technology tools, and materials are circulated as hard copies 	<p><u>What we are learning about digital learning during COVID-19.</u> (Aflatoun International, 2020)</p> <p><u>Low and high-tech assistive technology: A timeline.</u> (O. Martynenko, 2019)</p>
Content curation for learning	<p>A process of selecting resources, designing learning experiences using those resources and then sharing the experiences.</p>	<p><u>Content curation: A guide to content curation for learning and development (L&D).</u> (Sprout Labs, n.d.)</p>
Complex Emergency	<p>A multifaceted humanitarian crisis in a country, region, or society where there is a total or considerable breakdown of authority resulting from internal or external conflict which requires a multi-sectoral international response.</p>	<p><u>Glossary of Humanitarian Terms in relation to the Protection of Civilians in Armed Conflict</u> (OCHA, 2003)</p>
Conflict	<p>A feature of a system which includes two or more actors in pursuance of incompatible interests or goals. The term is often used interchangeably with violence - though a conflict may be violent or latent. Violent conflict is used to describe acts of open hostility. Latent conflict, often referred to as structural violence, is used to describe situations of tensions, which may escalate into violence.</p>	<p><u>Conflict-sensitive approaches to development, humanitarian assistance and peace building</u> (The Conflict Sensitivity Consortium, 2004)</p>

Designing for flexible teaching	Designing for flexible teaching enables quick and easy pivots between different modalities and enables students who are unable to attend class to continue without the loss of continuity. Whether due to illness, a sudden opportunity to speak at an out-of-town conference, or something else, designing your course for flexible teaching enables confidence and freedom when unforeseen circumstances arise. If considered in the initial design, adapting to sudden changes often requires only minor adjustments and preserves the experience of the students.	<u>Teaching Guides: Designing for flexible teaching.</u> (UNC Charlotte Center for Teaching and Learning, n.d.)
Digital Fluency	Digital fluency is a distinct capacity above and beyond digital literacy. In learning a foreign language, a literate person can read, speak, and listen for understanding in the new language. A fluent person can create something in the language: a story, a poem, a play, or a conversation. Similarly, digital literacy is an understanding of how to use the tools; digital fluency is the ability to create something new with those tools.	<u>Competent, Literate, Fluent: The What and Why of Digital Initiatives.</u> (The 2019 EDUCAUSE Learning Initiative (ELI), 2019)
Digital Literacy	Digital literacies go beyond technical proficiency, extending to the issues, norms, and habits that arise from the purposeful use of technology. Digital literacy focuses on why, when, who, and for whom.	<u>Knowing the Difference Between Digital Skills and Digital Literacies, and Teaching Both.</u> (M. Bali, 2016)
Digital Skills	Digital skills focus on which tool to use (e.g., Twitter) and how to use it (e.g., how to tweet, retweet, use TweetDeck), while digital literacy would include in-depth questions: When would you use Twitter instead of a more private forum? Why would you use it for advocacy? Who puts themselves at risk when they do so? Digital skills focus on what and how.	<u>Competent, Literate, Fluent: The What and Why of Digital Initiatives.</u> (The 2019 EDUCAUSE Learning Initiative (ELI), 2019)
Digital Pedagogy	Digital pedagogy is precisely not about using digital technologies for teaching and, rather, about approaching those tools from a critical pedagogical perspective. So, it is as much about using digital tools thoughtfully as it is about deciding when not to use digital tools, and about paying attention to the impact of digital tools on learning.	<u>Knowing the Difference Between Digital Skills and Digital Literacies, and Teaching Both.</u> (M. Bali, 2016)
Disaster	A serious disruption of the functioning of a community or a society causing widespread human, material, economic or environmental losses which exceed the ability of the affected community or society to cope using its own resources.	<u>Glossary of Humanitarian Terms.</u> (ReliefWeb, 2008)

Displacement	The forcible or voluntary uprooting of persons from their homes by violent conflicts, gross violations of human rights, natural hazards, and other traumatic events or threats thereof.	Glossary of Humanitarian Terms in relation to the Protection of Civilians in Armed Conflict (OCHA, 2003)
Distance Education	An umbrella term encompassing a variety of education approaches where there is teacher-learner separation in space and time (or both). Distance education covers high-, low-, no-tech approaches and solutions. It includes formal and non-formal learning at multiple levels (pre-primary, primary, secondary, post-secondary and all tertiary levels including technical and vocational education and training). Terms like “distance learning,” “online learning,” “remote learning,” and “e-learning,” which identify technology-enabled education approaches requiring digital devices and internet connectivity, are a critical subset of the wider distance education arena.	EiE Glossary (INEE, n.d.)
Education Response	The provision of education services to meet people’s needs and rights to education during an emergency through to recovery is known as an education response.	Minimum Standard for Education: Preparedness, Response, Recovery. (INEE, 2010)
Emergency	A sudden and usually unforeseen event that calls for immediate measures to minimize its adverse consequences.	Internationally agreed glossary of basic terms related to disaster management. (UN DHA, 1992)
Emergency Education	Emergency education is the provision of quality education opportunities that meet the physical protection, psychosocial, developmental, and cognitive needs of people affected by emergencies, which can be both life-sustaining and life-saving.	EiE Harmonized Training Package Module 1: The Rationale for Education in Emergencies. (INEE & Global Education Cluster, 2011)
Equitable education	An ‘equitable’ educational system is one in which all students are treated equally. The mindset is that all students are created equal; therefore, they are all equally entitled to education of the same quality. For example:	What is ‘equity’ in education. (Australian Council for Education Research, 2018)
	<ul style="list-style-type: none"> • Guaranteeing every student is taught by teachers with the same expertise • Providing the same school facilities and government funding for the education of every student 	

Fixed-time online courses	Fixed-time online courses are a type of synchronous course that requires online users to all visit a specific virtual location at a set time and place (e.g., a webinar). Unlike more rigid synchronous lessons, this does allow students from anywhere in the world to connect and interact online.	<u>What Is Distance Learning? And Why Is It So Important?</u> , (ViewSonic, 2020)
Forced Migration	The movement of population in which an element of coercion predominates, and it can be conflict-induced, caused by persecution, torture, or other human rights violations, poverty, or natural hazards. Elements of choice and coercion can be overlapping, but in the case of refugees and other displaced persons, compelling factors are decisive.	<u>People on the Move: Handbook of selected terms and concepts</u> (THP Foundation, 2008)
Hybrid course	<p>A hybrid course delivers instruction and learning activities in both face-to-face and online modalities.</p> <p>Expect that instructions and assignments will be partly presented in the classroom and partly online.</p> <p>The percentage or division of online and classroom learning for each hybrid course will vary depending on the course content and the faculty preference.</p> <p>Hybrid courses take advantage of the best features on both face-to-face and online learning, creating the "best of both worlds" within a single course.</p>	<u>Teaching Guides: Blended & Hybrid Learning</u> , (UNC Charlotte Center for Teaching and Learning, n.d.)
Hybrid learning	Hybrid learning is an educational approach where some individuals participate in person and some participate online. Instructors and facilitators teach remote and in-person learners at the same time using technology like video conferencing. With hybrid learning, the in-person learners and the online learners are different individuals.	<u>Hybrid vs. Blended Learning: The difference and why it matters</u> (C. Steele, 2022)
Inclusive Education	Having one system of education for all students, at all levels (early childhood, primary, secondary, and post-secondary), with the provision of supports to meet the individual needs of students. Inclusive education focuses on the full and effective participation, accessibility, attendance, and achievement of all students, especially those who, for different reasons, are excluded or at risk of being marginalized.	<u>USAID Education Policy</u> (USAID, 2018)
Massive Open Online Courses (MOOCs)	An online DE mechanism (platform) where teaching and learning is global (e.g., a general class on monitoring and evaluation). Some MOOC providers (e.g., Coursera, Udemy) offer a certificate or credit for a cost. They can be taught asynchronously, with active teacher monitoring, or be completely automated.	<u>Toolkit for Designing a Comprehensive Distance Learning Strategy</u> (USAID, 2021)

Mobility	'Mobility' with regard to learning denotes an important perspective on education relevant to this report: it recognizes that learning should not stop as people move and that people on the move are focused on continuing their education.	<u>Education in Conflict and Crisis: How Can Technology Make a Difference?. A Landscape Review.</u> (N. Dayha, 2016)
Offline Distance education	Distance education is completed offline when children who cannot attend a face-to-face school stay in their own home while working with a teacher who is located at a physical school elsewhere. Students in these schools communicate with their teacher by post, telephone, and online platforms, and the teacher sends them lessons to complete each week with the assistance of a supervisor, who is usually a parent.	<u>Offline distance education (already happening all around Australia) can be highly successful.</u> (EduResearch Matters, 2020)
Online Distance Learning	A distance learning modality that refers to teaching and learning that occurs via the Internet. Online education (or online learning) can be used to supplement in-person education (e.g., learners follow along on tablets during a guided reading exercise) or be the primary mode of delivery in distance learning settings (also called online distance education). Systems/methods that are currently available and fall under various recognized pedagogical approaches include, but are not limited to, the following: <ul style="list-style-type: none"> • Video conferencing • Synchronous vs. Asynchronous learning. • Open-schedule online courses • Fixed-time online courses • Computer-based DE • Massive Open Online Courses (MOOCs) • Blended learning • Hybrid learning • Hybrid Course • Designing for flexible teaching 	<u>Toolkit for Designing a Comprehensive Distance Learning Strategy.</u> (E. Morris, & Y. Tan, 2021)
Open-schedule online courses	Open-schedule online courses add yet another layer of flexibility for learners. It is a type of asynchronous course setup, except there are not any deadlines either. This is ideal for learners with other demands on their time, such as professionals or stay-at-home parents.	<u>What Is Distance Learning? And Why Is It So Important?.</u> (ViewSonic, 2020)
Quality Education	Education that is available, accessible, acceptable, and adaptable.	<u>Minimum standards for education: Preparedness, response, recovery.</u> (INEE, 2010)

<p>Synchronous vs. Asynchronous</p>	<p>Asynchronous learning involves students learning at different times and in different places. With synchronous learning, students learn at the same time but in different places.</p>	<p><u>Technology and education</u> (M. Burns, 2021)</p>
<p>Technology level (Low, Medium, and High)</p>	<p>No tech solutions are either paper based or face-to-face teaching in which learners are present in the same place with teachers</p> <p><i>Low-tech solutions</i> work with limited or no internet access and require basic devices; thus, they require little training to use them, may be less expensive and do not have complex or mechanical features.</p> <p><i>Medium-tech solutions</i> include offline access to content stored during a period of online connection using locally available memory accessible to people via their devices. This type of tech may also accommodate the type of resources available via high-tech solutions, albeit in a more compressed form. Medium-tech devices may have some complex features, may be electronic or battery operated, and may require some training to use them.</p> <p><i>High-tech solutions</i> often require internet access and use more advanced hardware like smartphones, tablets, laptops, etc. These solutions can be more interactive and can include video, images, simulations, and visible learning journeys. They can be relatively easy to produce because of ubiquitous and free open-source software. Additionally, there are thousands of apps or platforms that make their distributions to the learners relatively easy. High-tech devices are the most complex devices or equipment that have digital or electronic components and may be computerized.</p>	<p><u>What we are learning about digital learning during Covid-19.</u> (Aflatoun International, 2020)</p> <p><u>Low- and High-Tech Assistive Technology: A Timeline</u> (O. Martynenko, 2019)</p>
<p>Video conferencing</p>	<p>Video conferencing is a common way for teachers to interact directly with students in live lessons. This could be a one-on-one session or a class-like scenario in which multiple students connect to the teacher live.</p>	<p><u>What Is Distance Learning? And Why Is It So Important?</u>, (ViewSonic, 2020)</p>
<p>Virtual laboratory</p>	<p>A virtual laboratory is an interactive environment for creating and conducting simulated experiments. It involves the conduct of experiments with domain-dependent simulation programs. Indeed, a virtual reality technology can be adapted to create a virtual laboratory to simulate the processes and actions in physical laboratories.</p>	<p><u>Virtual science labs are real and can be used in blended learning.</u> (University World News, 2020)</p>

ANNEX 2: REFERENCES

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ANNEX 3: RESOURCES TO STRUCTURE A DISTANCE EDUCATION INTERVENTION

The section for each focus area above concluded with a checklist of key things to consider in a five-phase process cycle: (1) readiness, (2) planning, (3) implementation, (4) the transition to blended or face-to-face learning, and (5) monitoring and evaluation. This annex presents additional issues and phases that might be considered alongside additional resources that would serve to further help in structuring a DE intervention:

ISSUES & PHASES FOR STRUCTURING A DE INTERVENTION PROCESS	SOURCE
<p>Remote learning involves a four-step approach supported by continuous monitoring and adjustment:</p> <ol style="list-style-type: none"> 1. Understand and Envision: Establish a clear vision and create preconditions for success 2. Decide and Design: Design remote learning solutions 3. Enable and Execute: Rollout remote learning solutions and actively engage key stakeholders 4. Monitor and Adjust: Continuously improve in response to feedback 	<p><u>COVID-19 response – Remote learning strategy: remote learning strategy as a key element in ensuring continued learning.</u> (UNESCO, & McKinsey & Company, 2020)</p>
<p>Based on the framework, countries can tactically implement remote learning through four action checklists:</p> <ol style="list-style-type: none"> 1. Create a remote learning vision 2. Develop a remote learning strategy 3. Prepare the remote learning solutions rollout 4. Monitor and adjust 	
<p>Three phases of the Education Response to COVID-19 and corresponding interventions that can contribute towards building a more resilient, efficient, and inclusive education system:</p> <p>Phase 1: Coping: Key interventions</p> <p>Phase 2: Managing continuity: Key interventions</p> <p>Phase 3: Improvement and accelerating: Key interventions</p>	<p><u>The COVID-19 Pandemic: Shocks to education and quality responses.</u> (World Bank, 2020)</p>
<p>Three phases of the Education Response to COVID-19 and corresponding interventions that can contribute towards building a more resilient, efficient, and inclusive education system:</p> <p>Phase 1: Coping: Key interventions</p> <p>Phase 2: Managing continuity: Key interventions</p> <p>Phase 3: Improvement and accelerating: Key interventions</p>	<p><u>The COVID-19 Pandemic: Shocks to education and quality responses.</u> (World Bank, 2020)</p>
<p>A set of questions which try to frame, monitor, and evaluate DE interventions in emergency contexts.</p>	<p><u>Toolkit for designing a comprehensive distance learning strategy.</u> (USAID, 2019)</p>

ANNEX 4: TIPS FOR TEACHERS OF DISTANCE EDUCATION

This annex is dedicated for teachers who plan to deliver DE and/or who are delivering DE. It aims to suggest tasks and sub-tasks to be considered by teachers in their engagement in DE. It also suggests useful resources to be consulted in relation with some suggested tasks

Phase: READINESS		
Sub-Phase	Task Ideas	Useful Resources
Decide on the teaching modality	<p>Take part in discussions for decision making around best learning modalities for learners and teachers in your context</p> <p>Ensure the availability of tools and devices related to the agreed on DE modality at the personal level and among teachers and learners (e.g., computer, booklets, stationary, internet, electricity)</p> <p>Take part in decisions on the delivery tools (online or offline) to be used to realize the planned learning outcomes and which suit both learners and teachers operating at a distance, and how to integrate students and teachers</p>	
Understand the learners	Assess and understand the needs of targeted learners including learning needs, technical needs, social emotional needs, and material needs	

Seek professional development

Take part in quality Teacher Professional Development opportunities through official or recognized institutions offering to build the following skills: social-emotional skills, pedagogical skills, skills related to foundational pedagogy, content curation, asset-based approaches, the digital pedagogy chosen for DE, and the education modality (digital skills, communication skills, etc.)

More specifically, to prepare them to deliver online DE, teachers should have the opportunity to:

- Practice technology operations: i.e., how to use tools (e.g., Canvas, Zoom, Moodle)
- Understand the capability and benefits of a particular tool (e.g., the computer) which can be complex with many available applications and software
- Understand the various applications, their specific benefits for learning, and the challenges
- Understand how the tool improves students' content knowledge
- Identify the pedagogical methodologies to be used, the recommended ways of mixing them, and when/how a technology tool is complementary to them
 - When should direct instructions be used? When should cognitive models be used with students to let them learn together (e.g., by socializing, group work)? Inductive approaches? Deductive approaches?
 - How can the technology act as a tool for teaching using traditional methods? More complex ones like student-centered methods?
 - How should activities be designed for use with a particular technology?
 - How does the particular technology need to be set up to deliver?

Teachers must be supported in developing necessary, required skills, including:

- Fundamentals of teaching
- Understanding and elaborating learning objectives
- Pedagogy of teaching online learning modalities (i.e., delivery channels)
- Selecting and curating contents for online teaching
- Moving a face-to-face course online and translating an activity to a distance format, from the specific instructions to answering students' questions
- Translating the syllabus if necessary
- Condensing contents

- Prioritizing what's important in terms of areas to focus on and time allotment, especially in going from one medium to a second medium
 - Assessing learning
 - successfully facilitating and engaging learners, especially in low resource settings, who often have already lost three to five years of education and who face linguistic barriers, as in the case of many of [Amala Education's](#) students
 - Adapting for safety and privacy
 - Communicating, necessary for teaching but also necessary for keeping in contact with students and parents
 - Managing people online
- For offline distance education, the following knowledge and skills are recommended for cultivation:
- Selecting the learning channel or modality; e.g., one-on-one; going door to door to drop off paper packets and/or offer feedback; in small groups of five to 10 students
 - Designing micro or bite-size learning curriculum so it is short and attractive with clear instructions
 - Providing constructive feedback in person on the day of the assignment or on an appointed day as well as in just a few minutes

Seek personal and professional support	<p>Take part in peer support groups at institutional, local, national, and/or international levels</p> <p>Take part in activities to strengthen your well-being and seek specialized support whenever necessary</p>	
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Phase:
PLANNING

Sub-Phase	Task Ideas	Useful Resources
<p>Refer to national curriculum</p> <p>Design relevant curriculum for DE through online or offline delivery</p>	<p>Join the efforts to revise/design the curriculum and spaces where the revisions are discussed and validated</p>	

<p>Condense the curriculum and adjust it to the selected DE modality.</p>	<p>Often condensing curriculum means breaking it down into "bite size" lessons, including, for example, lessons of a size that can be shared via text or very short videos</p> <p>Prioritize learning, understanding that time is frequently more limited with distance learning</p> <p>If blended learning is the approach, prioritize what is best taught and learned in person and what can be taught and learned online</p> <p>Ensure that the lessons and teaching modalities adopted are flexible and culturally sensitive. For example, if teachers do not want to appear in videos sent to their students, they should be paired with other teachers willing to appear in recorded content</p>	<p>Catching Up on Lost Learning, Part 1: Applying Accelerated Approaches in Response to COVID-19 [Webinar]. (AEWG, 2020)</p> <p>Catching Up on Lost Learning, Part 2: Condensing a Curriculum in Response to COVID-19 [Webinar]. (AEWG, 2020)</p> <p>Chapter 4: Methods of teaching with an online focus. (Tony Bates Associates Ltd, 2019)</p>
<p>Plan for pedagogical materials that are most possible in emergencies, e.g., literacy, mathematics, coexistence, and social-emotional learning</p>	<p>Take part in setting security and protection measures to protect learners, teachers, and caregivers</p> <p>Apply consistently the set security and protection measures and keep the security and protection focal persons updated on any changes in the context, and/or or any protection risks or even suspicion</p> <p>Raise awareness of potential security and/or protection risks and ways to prevent them or ensure safety</p> <p>Incorporate messages that raise awareness of potential protection risks during DE or in the learners' context</p> <p>Incorporate messages and efforts to promote gender equality, inclusion of diversity, and social cohesion</p>	
	<p>Curriculum designed for offline or paper-based delivery must be in place beforehand since learners cannot be reached immediately as they can with online DE</p>	
<p>Identify Teacher Professional Development opportunities</p>	<p>Identify opportunities offering time and space to try new approaches; sometimes fail and understand that is an important and not unexpected part of DE</p> <p>Have all the necessary resources available before implementation</p> <p>Use locally available and contextualized resources</p>	

<p>Practice asset-based pedagogy</p>	<p>Start with a diagnostic learning activity to understand what students already know and can do</p> <p>Focus on integrating learning activities, like discussions and reflections, and projects, that include journaling, video, and pictures to keep learning local, community driven, and learner-centric</p> <p>Focus on delivering feedback that highlights what students know/can do and ways to leverage these to grow in other areas</p> <p>Intentionally communicate the value of differences (racial/ethnic, cultural, gender, age, social class)</p> <p>Focus on having students perform using real-world tasks and scenarios to keep learning relevant</p>	<p>3 steps to developing an asset-based approach to teaching. (Edutopia, 2020)</p> <p>Online teaching practices: Design and delivery. (Georgia State University, n.d.)</p>
<p>Practice content curation</p>	<p>Support learners in developing their abilities to judge, organize, and narrow resources/information</p> <p>Then support them in locating connections and areas of overlap/synthesis</p> <p>Promote higher level (i.e., rhetorical level) thinking</p> <p>Demonstrate the content curation process to learners: search out a topic, soft information, consider sources</p> <p>Draw connections between content curation in the classroom and what they are already doing on social media</p>	<p>Content Curation: Tools and Strategies for Teachers. (Resilient Educator, 2020)</p>

Phase: IMPLEMENTATION		
Sub-Phase	Task Ideas	Useful Resources
<p>Adopt a participatory approach</p>	<p>Ensure an engaged presence</p> <p>Presence and communication are what differentiates a DE class from a correspondence course</p> <p>Initiate interaction with students through both offline and online DE</p> <p>For online DE, do not simply post or send recorded lectures and textual materials online, along with exams or quizzes</p>	<p>Being “Present” in Your Online Course. (IU – Teaching Online, n.d.)</p>
<p>Maintain a continuous engagement with peers</p>		
<p>Maintain a follow-up on professional development and social emotional support</p>		

Phase:

TRANSITIONAL PHASE TO BLENDED OR FACE-TO-FACE LEARNING

Sub-Phase	Task Ideas	Useful Resources
Plan a mix of lessons appropriate for blended learning or gradual return to face-to-face learning		Refugee education: A rapid evidence review (EdTechHub, 2020) Developing educational platforms for displaced communities: Building a shared vision (UNESCO and UNHCR, 2017)

Phase:

MONITORING AND EVALUATING

Sub-Phase	Task Ideas	Useful Resources
Ask students to perform real-world tasks that demonstrate meaningful applications of what they are learning in your course Reflect on learners' progress and adjust as necessary	Adapt to changing local conditions	

ANNEX 5: TIPS FOR USING DIFFERENT DISTANCE EDUCATION MODALITIES

A literature review affirmed that using a mix of online and offline learning modalities provides benefits for students that are greater than when applying just one of these modalities.

For planning and prioritizing DE options, it is important to understand the reach of technology at the sub-national level, in rural and urban contexts, by gender, and, if possible, by wealth quintile. These factors are derived from evidence related to COVID-19 and education responses in 127 countries that was gathered by UNICEF (Dreesen et al., 2020, p. 10).

To support the planning, implementation, and monitoring of DE, technology levels are characterized as high-tech, mid-tech, and low-tech. Suggested tasks are presented below, along with useful guidance resources.

1. Provide high-tech DE in contexts where students, parents, and teachers have access to affordable connectivity and devices (mobile, desktop) at home or in other public settings open to them.

Main task ideas	Sub-task ideas	Useful resources
Assess the target population's access to hardware and affordable connectivity at home or in other public settings open to them	Survey access to hardware and connectivity among the most vulnerable learners	INEE Minimum Standards, Domain 1, Analysis Standard 1: Assessment (INEE, 2010) How many children and young people have internet access at home? (UNICEF & ITU, 2020)
Provide/use available national government platforms that deliver curriculum online	Use available digital learning materials that follow the curriculum	Remote learning COVID-19 response decision tree (UNICEF, 2020) National platforms delivering education case studies (UNICEF, 2020)

<p>Provide continued access to curriculum, including for learners with disabilities and those enrolled in non-formal education</p>	<p>Explore delivery through the UNICEF Learning Passport platform</p> <p>If curriculum in digital form is available or textbooks can be scanned into PDFs, interested countries should seek access to the Learning Passport platform to provide continued access to curriculum for learners with connectivity</p> <p>Explore digital platforms that support alternative delivery of curriculum, e.g., the EduNET (Bahrain), Nafham (Egypt, Syria, Saudi Arabia, Algeria and Kuwait.), etc. This list addresses non-curricular and informal learning, noting that some tools on these platforms have paid options for extra content/functionality</p>	<p>Remote learning COVID-19 response decision tree (UNICEF, 2020)</p> <p>The Learning Passport scenario (UNICEF, 2020)</p>
<p>Provide technical, pedagogical, and social-emotional support for both teachers and students</p>	<p>Explore resources to provide psychosocial support</p> <p>Explore collaboration platforms that support live-video communication</p> <p>Encourage active interaction between students and teachers, among students, and among teachers</p> <p>Provide Professional Development for teachers</p>	<p>Distance learning solutions (UNESCO, n.d.)</p>
<p>Encourage school-age children and youth to continue learning, including by providing information about available free digital tools for informal learning outside of school</p>	<p>Explore Communication for Development (C4D) approaches</p>	<p>Distance learning solutions (UNESCO, n.d.)</p>

Actively engage parents and caregivers in children's learning	<p>Inform parents and caregivers about</p> <ul style="list-style-type: none"> • Available tools that can be used to engage in digital learning during school closure • Ways to check the digital resources children are accessing and how to avoid those that do not seem safe or that require detailed personal information 	<p>Communication for Development (C4D) online course (UNICEF Agora, n.d.)</p> <p>Digitally enabled learning: Informal learning at home using free/open apps and websites retrieved from Remote learning COVID-19 response decision tree (UNICEF, 2020)</p>
Build technical, in-kind, and financial partnerships	<p>Support communication between teachers and parents via phone, SMS, WhatsApp groups, etc.</p> <p>Build multi-level and stakeholder partnerships at the global, regional, and country level with governments, multilaterals, the private sector, and civil society. These include education providers (e.g., volunteer teachers, primary and secondary education departments, inspectors of primary and secondary education, curriculum-development agencies, and the national broadcasters), as well as technicians, actors, musicians, producers, trainers, evaluators, and management personnel</p>	
Protect learners' data	<p>Protect learners detailed personal information, such as their identity, location, ethnic, and/or religious affiliations</p>	
Monitor and evaluate	<p>Monitor and evaluate learning</p> <p>Document and share best practices, lessons learned, and challenges</p>	

2. Provide mid-tech DE in contexts where students, parents, and teachers have access to affordable connectivity via devices that may include mobile and desktop but are more likely to include radio, television, and basic telephones, at home or in other public settings open to them.

Main task ideas	Sub-task ideas	Useful resources
Assess the delivery channel used most often by your target population	This includes considering channels such as TV and/or radio	INEE Minimum Standards Domain 1, Analysis Standard 1: Assessment (INEE, 2010)
Provide/use available national government curriculum	<p>Use available learning materials that follow the curriculum</p> <p>In the prepared content, include interactive components that capture the attention of learners, particularly the youngest</p> <p>Consider providing a platform for the exchange of information and experiences among teachers and between teachers and students, such as mobile apps or videos, as well as online quizzes. For example, in Lithuania, the national broadcaster put together interactive homework challenges, encouraging children to actively participate in the activities by recording themselves and sending in their videos</p>	<p>Remote learning COVID-19 response decision tree (UNICEF, 2020)</p> <p>Distance learning solutions (UNESCO, n.d.)</p>
Provide technical, pedagogical, and social-emotional support for both teachers and students	<p>Encourage active interaction between students and teachers, among students, and among teachers</p> <p>Provide Professional Development for teachers</p>	Distance learning solutions (UNESCO, n.d.)
Build technical, in-kind, and financial partnerships	Build multi-level and stakeholder partnerships at the global, regional, and country levels with governments, multilaterals, the private sector, and civil society. These include education providers (e.g., volunteer teachers, primary and secondary education departments, inspectors of primary and secondary education, curriculum-development agencies, and the national broadcaster), as well as technicians, actors, musicians, producers, trainers, evaluators, and management personnel	

<p>Provide continued access to curriculum, including for learners with disabilities and those enrolled in non-formal education through telephone, TV, radio, or SMS</p>	<p>For Interactive Radio Instruction (IRI):</p> <p><i>Development Phase</i></p> <ol style="list-style-type: none"> 1. Prepare scripts of educational materials 2. Distribute scripts and other materials 3. Assign and finance radio technicians, actors, musicians, producers, trainers, evaluators, and management personnel 4. Ensure necessary procurement to: 5. Seek international donor assistance, especially at this phase, for developing, piloting, and testing to capture and understand learning gains, as well as teacher acceptance and support <p><i>Implementation Phase</i></p> <p>The sustained implementation phase depends on commitments from governments, donor agencies, teachers, and students. This commitment depends in turn on a number of policy and design factors. It is important to consider sustainability and incorporate sustainability measures throughout both phases.</p>	<p>Distance learning solutions (UNESCO, n.d.)</p> <p>Remote learning COVID-19 response decision tree (UNICEF, 2020)</p> <p>Interactive radio instruction: Impact, sustainability, and future directions (English) (World Bank Group, 1999)</p> <p>Learning through radio and television in the time of COVID-19 (UNESCO, 2020)</p>
<p>Encourage school-age children and youth to continue learning and offer information about available learning opportunities</p>	<p>For Television (TV):</p> <p><i>Preparation Phase</i></p> <ol style="list-style-type: none"> 1. Plan 2. Distribute materials 3. Assign and finance: 4. Ensure the necessary procurement to: 5. Seek international donor assistance for the development phase to cover planning, piloting, and testing 	<p>Communication for Development (C4D) online course (UNICEF Agora, n.d.)</p>
<p>Actively engage parents and caregivers in children's learning</p>	<p>Inform parents and caregivers of available tools that can be used to engage in learning during school closure</p> <p>Offer free SIM cards and/or low-cost SIM cards to teachers, parents, and students</p> <p>Support communication between teachers and parents via phone, SMS, WhatsApp groups, etc.</p>	
<p>Monitor and evaluate</p>	<p>Monitor and evaluate learning</p> <p>Document and share best practices, lessons learned, and challenges</p>	

3. Provide low-tech DE

Paper-based DE remains especially important for reaching children and youth with no access to technology. However, it is important to keep in mind that those learners are likely to have illiterate parents, and that they too are likely to be illiterate (UNICEF Regional Office for South Asia, May 2020).

Main task ideas	Sub-task ideas	Useful resources
Assess the delivery channel most used by your target population	This includes considering channels such as TV and/or radio, as well as paper and pencil	<p>INEE Minimum Standards Domain 1, Analysis Standard 1: Assessment (INEE, 2010)</p> <p>Keeping children learning during the COVID-19 pandemic – Printed/Paper-based Materials (UNICEF Regional Office for South Asia, n.d.)</p>
Provide/use available national government curriculum	Use learning materials that follow the curriculum	<p>Remote learning COVID-19 response decision tree (UNICEF, 2020)</p>
Provide continued access to curriculum, including for learners with disabilities and those enrolled in non-formal education, by providing home-learning packets, home visits, newspapers	<p>Develop and distribute printed home-learning packs across the education cycle to ensure that, at a minimum:</p> <ul style="list-style-type: none"> • Every 5-year-old is ready for school, including ensuring they are on track to identify or name 10 letters of the alphabet and recognize numbers from 1 to 10 • Every 10-year-old is positioned to succeed at school, with the ability to read a simple paragraph and do basic math • Every 18-year-old is ready to transition to work and life, including having literacy/ numeracy, digital, transferable, and job-specific skills <p>In general, a good set of paper-based resources will include material spanning the full learning cycle: planning, learning, practice, and assessment. Young children will benefit from variety, including toys, puzzles, blocks, art supplies, and other materials, and/or locally made materials that spark curiosity, exploration, and interaction. An example is UNICEF's ECD kit for children in emergency settings.</p>	<p>Keeping children learning during the COVID-19 pandemic – Printed/Paper-based Materials (UNICEF Regional Office for South Asia, n.d.)</p> <p>INEE Mapping Report: Distance Education in Emergencies (INEE, 2020)</p>

<p>Provide well-designed paper-based materials in a format most children will be familiar and comfortable with</p>	<p>Printed learning kits may include books, worksheets, Background Papers (for parents/caregivers and learners), activity booklets, and notebooks, as well as pens, coloring pencils, rulers</p>	<p>Guidance continuity of learning during COVID-19. Reaching all Children and Youth during School Closures (UNICEF ROTA, 2020)</p>
<p>Provide technical, pedagogical, and social-emotional support for both teachers and students</p>	<p>Explore resources to provide psychosocial support</p> <p>Encourage home visits for direct feedback between students and teachers</p> <p>Provide Professional Development for teachers to enable them to use in-person interactions with parents and students to the fullest, including preparing them to provide targeted feedback concisely</p>	<p>Distance learning solutions (UNESCO, n.d.)</p>
<p>Provide teacher-guided learning</p>	<p>It is important that teachers continue to engage and interact with their students, provide assignments, and, importantly, provide timely feedback. This can be done, for example, through home visits, calls and SMS, or social media for those with connected devices.</p>	<p>Guidance continuity of learning during COVID-19. Reaching all Children and Youth during School Closures (UNICEF ROTA, 2020)</p>
<p>Build technical, in-kind, and financial partnerships</p>	<p>Build multi-level and stakeholder partnerships at the global, regional, and country levels with governments, multilaterals, the private sector, and civil society. This includes education providers, design and printing providers, distribution partners, etc.</p> <p>This includes developing transportation reimbursement plans and, in some contexts, security plans for teachers and staff members as they deliver packets or conduct home visits</p>	
<p>Encourage school-age children and youth to continue learning and offer information about available learning opportunities</p>	<p>Explore Communication for Development (C4D) approaches</p>	<p>Communication for Development (C4D) online course (UNICEF Agora, n.d.)</p>

Actively engage parents and caregivers in children's learning	<p>Inform parents and caregivers about available tools that can be used to engage in learning during school closure</p> <p>This includes encouraging them to think about locally available materials that can be used for learning</p> <p>Consider engaging a "mediator" to lead and support learning, typically a parent, young adult, or community leader who has completed secondary education</p> <p>Offer free SIM cards and/or low-cost SIM cards to teachers, parents, and students</p> <p>Support communication between teachers and parents via phone, SMS, WhatsApp groups, etc.</p>	<p><u>Continuous Remote Learning: Strengthening Family Engagement in Supporting Home-based Learning during COVID-19</u> (UNICEF, n.d.)</p>
Monitor and evaluate	<p>Monitor and evaluate learning</p> <p>Document and share best practices, lessons learned, and challenges</p>	

ANNEX 6: EXPERTS AND PRACTITIONERS INTERVIEWED FOR THIS PAPER

1. A. Alkhateeb, E-Learning Education Specialist, Plan International Jordan, November 9, 2021
2. A. Frago, Plan International, November 9, 2021
3. A. Oswald, NRC, DERD member, November 2, 2021
4. A. Twinomugisha, Word Bank, November 10, 2021
5. C. Groeneveld, EdTech Hub, November 5, 2021
6. D. Barrios, National Technical Advisor on Education in Emergencies at Plan International-Colombia, November 26, 2021
7. D. Woolis, Director of the Center for Learning in Practice-Early Childhood International, INEE DERG Co-Chair, November 4, 2021
8. E. Karamichail, Education Coordinator and Greece Programme Coordinator, Amala Education, November 11, 2021
9. E. Lory, EIE Specialist at Plan International Canada, INEE DERG member, November 9, 2021
10. F. NograAbog, Plan International, November 10, 2021
11. J. Wolf, Imagine Worldwide, November 8, 2021
12. K. Ali Shah, IRC, DERD member, November 4, 2021
13. K. Williams, PhD International Education Policy, Graduate Research Assistant at the UMD Teaching and Learning Transformation Center, INEE DERG member, November 10, 2021
14. L. Amonde, UNHCR, INEE DERG Co-Chair, November 8, 2021
15. L. Olsen, Norad, DERD member, November 9, 2021
16. L. Stannard, Save the Children, November 2, 2021
17. M. Burns, Senior Technology Specialist, Education Development Center, DERD member, November 5, 2021
18. M. Younes, Founder of Beyond Borders Consulting, DERD member, November 5, 2021
19. S. Luke, FHI 360, November 5, 2021
20. S. Tutunji, Academic Director of Refugee Education Program, Jusoor, November 12, 2021



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