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Distance learning strategies in response to COVID-19 school closures

Introduction

Education systems around the world are facing an unprecedented challenge in the wake of massive school closures mandated as part of public health efforts to contain the spread of COVID-19. Governmental agencies are working with international organizations, private sector partners and civil society to deliver education remotely through a mix of technologies in order to ensure continuity of curriculum-based study and learning for all.

Establishing or scaling up distance learning strategies are a sector-wide response to sudden interruption of educational processes as a result of unexpected COVID-19 school closures. These strategies are guided by a concern for equity and inclusion and the need to ensure the design and delivery of distance learning do not exacerbate existing educational and social inequalities. The planning of more comprehensive distance learning strategies should, however, be guided by both immediate mitigation needs and long-term goals. Beyond the response to the current crisis, the efforts to deploy distance learning at scale across all levels of education provides valuable lessons and may lay the foundation for

longer-term goals of building more open, inclusive and flexible education systems after the COVID-19 pandemic has passed.

Defining the topic and related key issues

Distance learning: In a broad sense, distance learning is a term often used synonymously with online learning, e-learning, distance education, correspondence education, external studies, flexible learning, and massive open online courses (MOOCs). Common features of any form of distance learning are: the teacher-learner separation by space or time, or both, and the use of media and technology to enable communication and exchange during the learning process despite this separation. This may be achieved through print-based learning materials, or one-way massive broadcasting (TV and radio programmes), or through web-based exchange using social media channels or learning platforms. Distance learning tends to require a high level of self-directed learning on the part of the learner, and study skills, which must be supported through new teaching, learning and guidance strategies.

Distance learning strategies: Distance learning strategies in response to COVID-19 school closures are a set of sector-wide measures taken by government agencies and partners to continue students' curriculum based studies and other regular educational activities when schools and other physical educational institutions are closed. For this to succeed, learning activities should be reviewed, and alternative solutions to providing learning programmes remotely should be planned and delivered with the support of teachers, the education community and in collaboration with students and their families. While national distance learning strategies consider the complementarity of formal and non-formal education and the range of education and training levels for lifelong learning pathways, this issue note focuses on school education.

Almost overnight, learners, teachers, and parents or caregivers have to ensure school education activities without the formal school settings. Common issues to be addressed by distance learning strategies include: how students can access remotely delivered content and communicative support; how learners' rights and data privacy can be protected; how teachers are supported in the transition to remote teaching; and how financial and technological resources can be mobilized to sustain the provision for several months.

Readiness for distance learning: The effectiveness of distance learning strategies is conditioned by levels of preparedness from various perspectives:

- **Technological readiness:** This generally includes levels of readiness in both technological capacities of digital learning platforms or TV and radio broadcasting systems to provide curricular courses remotely to all learners, as well as in household access to electricity, telephones, televisions, radio, digital devices, internet connectivity and data.
- **Content readiness:** This includes accessibility to teaching and learning materials aligned with national curricula that can be delivered through online platforms, TV or radio programmes, or used for print-based home learning. Readiness of curricular content that cover all grade levels and all subject areas and can be delivered to all learners often remains a challenge. In many countries, gaps exist in terms of the resources and local expertise needed to rapidly develop national curricula courses readily accessible through online platforms or TV and radio programmes.

- **Pedagogical and home-based learning support readiness:** This includes preparedness of teachers to design and facilitate online learning, TV or radio based distance learning, or print materials based home learning; and availability and ability of parents or caregivers to facilitate effective home-based distance learning. Most teachers are not adequately prepared for the transition of provision of school education, and families are not ready to facilitate and monitor daily home-based learning especially with multiple children. It is much more challenging when parents lack the language and literacy skills and the time to follow schedules of studies and manage learning processes.
- **Monitoring and evaluation readiness:** This includes capacities: to monitor distance learning processes, to track the access to courses and engagement, to assess learning outcomes, and to sustain immediate distance learning responses for achieving long-term goals. In the context of online learning, it is critical to monitor differences in the level of participation and engagement of students who often have weaker self-regulation and self-organization skills. When TV or radio programmes, which are one-way knowledge transmission systems, are adopted as the main solution, it is more challenging to measure the extent to which students, teachers, and parents or caregivers are engaged with distance learning.

Lessons from past practices and current crisis

One of the most important lessons to be learnt from the past distance learning responses to pandemics is that it is best to plan for months of school closures rather than weeks. Schools, teachers and families or households should be supported to undergo a rapid paradigm shift to a new daily routine of the remote provision of education and maintain it for months. The following insights, actions and points of know-how can be drawn from good practices of education responses to recent pandemics.

Manage the distance of new learning settings and provide remote supervision: Delivering education remotely changes the learning settings, which leads to a physical and psychological separation and distance between teachers and learners, and among peer learners. In the new learning settings, learners also gain more autonomy and teachers lose some opportunities for direct control and supervision. Supporting and engaging teachers and parents or caregivers to provide regular supervision can help reduce the sense of distance and disengagement, and manage the rules or disciplines needed for home-based learning.

Adjust formative assessment to improve remote monitoring of learning processes: Purposefully designed regular (daily or 2-3 times a week) formative assessments have proved an effective means to monitor learning processes and to inform the learner on their progress. This is particularly important for TV or radio-based distance learning. Adjustment of the methodologies and formats of formative assessment (e.g. SMS based items and answers) is important to ensure that all students can receive the questions and send back feedback.

Prepare teachers for pedagogical shifts and facilitate collaboration among teachers: Key to successfully shifting to distance learning is not only to train and support teachers, but also to promote collaboration among teachers. Engaging teachers in the design of massive distance learning programmes, especially TV or radio programmes, can lead to best possible integration of technology and pedagogical methodologies. Teachers should be supported on how to find solutions to common challenges such as supporting learners overcome distance and disengagement, adjusting instructional design to motivate students and maintain engagement, and developing and sharing teaching and learning resources and best teaching practices. Particular attention may be needed to retain female

teachers with young children, who are coping with the double burden of domestic and teaching responsibilities.

Support disadvantaged groups: Learners with no access to household radio, TV, or connected digital devices, and students with disabilities are the most disadvantaged groups for distance learning programmes. Distance learning only supported through paper-based materials or offline content will offer much less possibilities for interaction with teachers and other students, even though SMS through feature phones can be a remedy for simple forms of communication. Provision of grants to low-income families can support the most disadvantaged learners to have access to basic digital devices, and assistive tools can help students with disabilities. Harmful gender norms may lead to girls having a disadvantaged status in homes with less opportunities for accessing and using the limited number of household technological devices, and less learning time due to disproportionately more home care duties. Policies and measures should be taken to support gender-equitable access to household learning devices, and flexible programme scheduling and learning structures should be designed with a focus on being more inclusive to female students in difficult circumstances. Even it is not the focus of this issue note, learners in humanitarian crisis settings including children in refugee camps and those who are internally displaced need special support.

Boost the technological capacities of national distance learning platforms: Learning platforms managed by governmental, public agencies or universities, are key components of distance learning strategies. The services of platforms include supporting the delivery of lessons, hosting and managing learning materials, and supporting teacher and learner communication. The bandwidth of these platforms needs to be upgraded based on an estimate of the increased number of simultaneous visitors during school closures. And functionalities in terms of supporting online teaching and learning or massive TV and radio programme broadcasts need to be enhanced as well. Courses and content of the platforms should be intentionally designed to enable inclusive accessibility - meaning that they can be customized and adjusted for individual needs, including students with disabilities. Useful principles include Universal Design for Learning (UDL) (see Reference v). With the use of distance learning platforms, it is imperative to review the data privacy regulations.

Curate and align open educational resources (OER) with national curriculum: It is suggested that countries facing the challenge of making national curricula courses readily accessible for all grade levels and subjects consider curating resources from major databases of open educational resources and aligning relevant resources with the national curriculum. OER courses and learning materials released in the public domain or under open licenses permit no-cost access and also encourage more dynamic sharing of resources among teachers (see Reference iv). To this effect, newly developed distance learning materials should also be released as open educational resources, and teachers should be provided with tools and training to develop and share high quality materials.

Key messages and practical tips for designing policy interventions

While the scale of COVID-19 school closures is unprecedented in history, the scale of the shift from physical provision of education to distance learning programmes covering all levels and all types of education is even larger. This also provides societies with large real-life laboratories for experimenting with nationwide and system-wide distance learning practices and the possible models relevant to the future of education. However, this opportunity should be taken up with caution. Due to the necessity for speed of transition to distance learning, the process will not be perfect from the start, but it should be iteratively improved. And above all, the following principles and actions should be taken into account to ensure that any immediate response does no harm to equity and inclusion, and the

effectiveness of long-term distance learning strategies in promoting inclusion, equity, and the quality of learning can be maximized.

Adjust curricular objectives and prioritize humanitarian social caring: Pandemics cause trauma, psychological stress, and negative emotional reaction. Before the provision of academic studies, mobilize available tools to ensure regular human interaction and enhance human connection to address the senses of loneliness, and provide social care assistance to address possible psychosocial challenges that students may face when they are isolated or bereaved (see References vi, vii). Organize discussions with stakeholders to examine the possible duration of school closures and decide whether the distance learning programme should focus on teaching new knowledge or enhance students' knowledge of prior lessons. Define objectives of distance learning programmes around all key aspects of national curricula and broader educational goals to avoid imbalanced emphasis on academic learning objectives.

Examine the readiness and choose the most relevant and context sensitive technological solutions: Decide on the use of high-technology and low-technology solutions based on the reliability of local power supplies, internet connectivity, device ownership and digital skills of teachers and students. This could range from online learning platforms, video lessons, online courses (MOOCs), to massive broadcasting of radios or TVs programmes and the distribution of printed materials. Choose a mainstream technology to deliver curricular courses to students at certain grade levels and avoid asking students and teachers to navigate around many delivery systems or channels; for example, online learning platforms as a mainstream distance learning solution for secondary schools, and TV programmes for primary schools supplemented by online resources and communicative tools.

Increase the technological and content preparedness to ensure the continuity of education and learning: Upgrade the bandwidth and functionalities of existing distance learning platforms or develop new ones to meet the significantly increased demands from teachers and students. Develop, adapt and curate existing high quality OER courses to fill the gaps of curricula courses and materials to be delivered to teachers and students. Plan the schedule of studies depending on the level of studies, the needs of students, and the availability of learner support through parents and local communities. Select and recommend reliable applications that can provide teaching and learning services based on local languages, including learning management systems, video-conferencing applications, social media applications, and feature phone-based SMS. When an online learning model is adopted, try to avoid overloading and confusing students and parents by asking them to download and register for too many applications or platforms.

Ensure equity and inclusion: Implement measures to ensure that all students have access to distance learning programmes, and to ensure inclusive access to distance learning opportunities for all learners without harmful impact on the most vulnerable groups (see Reference i). Curricular courses should be made accessible for learners with disabilities and those whose primary language is not the language of instruction in schools (e.g. [New Zealand funds two TV channels to broadcast curricular content – one in English and one in Māori](#)). Take quick measures to ensure all learners have access to courses being delivered remotely including temporarily decentralization of digital devices from computer labs or leasing digital devices to students from low-income families (e.g. [the Lithuanian Education Ministry leases 35,000 computers to over 30,000 schoolchildren from the disadvantaged families](#)), providing temporary free internet data packages, or granting a reduced data pricing or free access to educational content. An option is to negotiate with telecom sectors to offer zero-rate educational traffic to national learning platforms and online learning service systems, institutional repositories, and digital library

services (e.g. In South Africa, [Internet Service Providers' Association promotes zero-rating educational traffic](#) during COVID-19 crisis).

Protect learners' privacy and data security: Ensure that the management of national platforms and the private providers of applications do not violate students' personal privacy. This relates to data security when uploading privacy sensitive data or educational resources to web spaces, as well as when sharing them with other organizations or individuals. Take concrete measures to ensure ethical, non-discriminatory, and transparent use of learners' data (e.g. Reference iii). Develop educational data protection regulations and only accredit services from vendors who adhere to such regulations. European Union's Data Protection Regulation provides an example of terms on full transparent use of private data and the right to be forgotten, which allows records based on private data to be removed at any point in time.

Support teachers to plan and facilitate distance learning, and engage parents and caregivers:

Organize quick trainings for teachers on the use of distance learning tools, and on the design and facilitation of distance learning activities in order to help them adapt to the new learning settings. Help teachers to prepare the basic facilities they will need for teaching from home, and for facilitating and monitoring learning remotely. Support local education supervisors and schools to engage parents or caregivers to manage home-based learning. Provide them with guidance materials or develop rules together with parents and students on the management of daily home-based learning practices. Create communities of teachers, parents and school managers to keep regular information exchange, and to discuss coping strategies to key challenges (e.g. in Estonia, [a Facebook group created for supporting remote e-learning](#)). For families that do not have parents or caregivers available to look after students, provide safe caring spaces or provide financial support to families to access to private children caring services.

Blend student-centred teaching, monitoring and assessment methodologies to ensure effectiveness of distance learning:

Guide teachers to design appropriate methodologies for the provision of online teaching, or for the organization and facilitation of learning based on TV or radio programmes or print-based materials. Design the duration of the distance learning units based on students' self-regulation and metacognitive abilities, especially for screen-based learning - preferably, the unit for primary school students should not be more than 25 minutes, and no longer than 40 minutes for secondary school students. Improve students' engagement through pedagogical approaches that are appropriate for their interests and cognitive abilities, including utilising possible group discussion, peer assistances, and peer assessment. Design formative questions, tests, or exercises to monitor closely students' learning processes. Encourage the use of available tools to support the submission of students' answers or feedback, and avoid overloading parents by requesting them to scan and send students' feedback.

Plan for sustainability and long-term goals:

There will be a transition period back to more school-based learning settings during which some elements of distance teaching and learning practices will revert quickly back to face-to-face provision. Therefore, it is advisable to plan strategies which progress from the provision of rapid responses, to a transitional period, to a long-term goal of improved education provision systems. Looking to the future, actions now being taken to ensure the effectiveness of distance learning will lay a solid foundation for more technology-enhanced pedagogical innovations, more open and flexible learning environments, and a more vibrant education system. The long-term goal should be to integrate key principles and key constituent elements for more inclusive, more open, and more resilient systems when education stabilises to a new normal. Key elements of the new normal include the enhanced accessibility for the most vulnerable groups, upgraded learning platforms, distance learning courses covering all grade levels and all subjects, and teachers' improved capacities in designing remote teaching and facilitating distance learning.

For further [guidance for planning distance learning solutions](#) to support education systems during this crisis, please visit UNESCO's list of [open digital educational resources](#) and a repository of [national distance learning platforms](#) designed to support the continuity of curriculum-based study. More information on UNESCO's education response to the COVID-19 crisis is available at: <https://en.unesco.org/covid19/educationresponse>.

Key references

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About UNESCO Education Sector's Issue Notes

UNESCO Education Sector's issue notes cover key topics related to the COVID-19 education response. They provide evidence of good practices, practical tips and links to important references for each topic in an effort to mitigate the impact of school closures.

The issue notes cover several topics under nine thematic areas, namely: Health and wellbeing; Continuity of learning and teaching; Gender equity and equality; Teaching and learning; Higher education and TVET; Education and culture; Education policy and planning; Vulnerable populations, as well as Global Citizenship Education and Education for Sustainable Development

They are prepared collectively by UNESCO education colleagues across the world. The present note was developed by the UNESCO Section of Education Research and Foresight, Unit for ICT in Education, and UNESCO Institute for Information Technologies in Education

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COVID19taskforce@unesco.org



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