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**Curtin University**

# The impact of 'learning at home' on the educational outcomes of vulnerable children in Australia during the COVID-19 pandemic

A summary literature review prepared by the National Centre for Student Equity in Higher Education (NCSEHE) for the Department of Education, Skills and Employment

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# The impact of ‘learning at home’ on the educational outcomes of vulnerable children in Australia during the COVID-19 pandemic

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## Executive Summary

This review provides an overview of current approaches to managing school closures as well as recent literature related to young people learning "outside of school". A range of material has been drawn upon to both highlight the educational issues of this learning context, as well as the psychosocial and emotional repercussions. This summary literature review combines research on technology and learning, online learning and distance learning with very recent analysis of the educational impacts of COVID-19. Globally, while some countries have opted for a mass school shut-down, many schools remain open for more vulnerable students (UNESCO, 2020a). This "partial closure" is not only to enable learning in smaller targeted groups but also to offer a "safe" sanctuary for those who desperately need a regulated and secure environment including the provision of "free" hot food and also, company.

In summary, currently within Australia if there were mass school closures there is potential for around four million students to be affected:

- In 2019, there were 3,948,811 students enrolled in 9,503 schools, with 2,263,207 primary students and 1,680,504 secondary students.
- If 20 per cent of these young people are living in financially disadvantaged or low socioeconomic status (SES) communities and are required to study off campus then around 800,000 will be subjected to a range of barriers and/or risks including:
  - long-term educational disengagement
  - digital exclusion
  - poor technology management
  - increased psychosocial challenges.

UNESCO (2020b) have developed 10 key recommendations to ensure that learning remains uninterrupted during the COVID-19 crisis (see Appendix One). There is global evidence of countries adopting, to some degree, at least seven of these recommendations during mass closures, which include:

- examining the readiness of the school for closure (including the technology available)
- ensuring distance learning programs aim for inclusivity
- prioritising solutions to address psychosocial challenges before teaching
- providing support to teachers and parents on the use of digital tools
- blending appropriate approaches and limiting the number of applications and platforms used
- developing distance learning rules and actively monitoring students' learning process
- creating communities that enhance connection.

## Context and Background

Recent figures (UNESCO, 2020c) indicate that country-wide school closures have been instigated in over 191 countries globally as a result of the COVID-19 pandemic. These decisions are estimated to have impacted 91.3 per cent of enrolled students, which is over 1.5 billion students worldwide. Most countries have moved to online delivery of education, but there is growing disquiet about how this move impacts on those students who are the most socially and financially disadvantaged in society. Concerns are focused on how this cohort may be impacted educationally, emotionally and also socially — with emphasis on the need to ensure that this student population is adequately supported to continue in their learning. This brief literature review provides a high-level summary of the major factors impacting on those students who are regarded as being educationally at-risk within Australia. The range of issues that impact on our more vulnerable student cohorts within the existing national school system will also be outlined, including the repercussions that might follow a mass school closure within Australia. Details of how other countries are tackling these issues is also provided which includes details of emerging good practice in what is becoming the first global mass school closure of its time.

## Defining "Vulnerability"

Vulnerability is a multifaceted concept with different meanings and numerous implications. For the purposes of this paper, vulnerability will be defined as *variability in living standard*, with household vulnerability characterised by low household incomes (Alwang et al., 2001). Vulnerability encompasses those young people who may be living in financially disadvantaged or low socioeconomic status (SES) communities. Such communities can be differentiated by housing stress, overcrowding, poor mental and physical health, issues around community safety, higher crime convictions (Griggs et al., 2008; Pinoncely, 2016), joblessness, as well as low levels of cohesion, trust and resources (Larsen, 2013). Many factors can contribute to vulnerability and can undermine the capacity for self-protection, exposing some population groups to greater or more frequent hazards than other groups. These individual and family risk factors can entrench communities in poverty and social disadvantage (Vinson et al., 2015). As a result, young people from financially disadvantaged backgrounds may experience a range of social, emotional and behavioural problems (Edwards & Baxter, 2013) including being developmentally vulnerable when commencing school compared to higher SES peers (Edwards & Baxter, 2013).

## Education and Vulnerable Students

There is considerable research across the Australian educational sector, indicating that a "cycle of intergenerational disadvantage can be seen repeating itself in the lives of many young people from low socioeconomic backgrounds" (Mission Australia, 2017, p. 1). Examination of the distribution of students across school sectors by Index of Community Socio-Educational Advantage (ICSEA) indicates how socially segregated schooling in Australia has become (Kenway, 2013; Perry & McConney, 2013)<sup>1</sup>. Examination between high and low ICSEA rated schools indicates a schooling system characterised as having differentiated learning opportunities mediated through unequal access to academic curriculum, learning resources and experiences, and quality pedagogy built on high expectations (Lamb et al., 2001; Naylor & James, 2015). Within low ICSEA high schools, educational attainment levels and school completions are low resulting in less transition to university and higher levels of unemployment for youth (Herault & Klab, 2008; Leventhal & Brookes-Gunn, 2000; Mission Australia, 2017).

The Australian Bureau of Statistics (ABS) (2019) data show there are 3,948,811 students enrolled in 9,503 schools, with 2,263,207 primary students and 1,680,504 secondary students.

Therefore, if mass school closures occur nearly four million students will be affected (ABS, 2019).

The existing differentials between schools and students may be exacerbated by the very speedy global mass movement to online and off-site delivery of education as schools and universities close their physical campuses. A school's resources, teacher's skills and student characteristics all vary across different educational institutions, and as a result, students will not receive the same learning opportunities. In particular, students from low socioeconomic backgrounds are most at risk.

That is, 20 per cent of the student population, approximately 800,000 students in the lowest quintile income for households, come from low SES households.

In addition, there are 139,163 primary Aboriginal and Torres Strait Islander students and 230 291 secondary Aboriginal and Torres Strait Islander students (ABS, 2019).

Therefore, the large proportion of vulnerable students need careful consideration should long-term national school closure be instigated within Australia. Fortunately, Australian educators can learn from "common learnings" derived from countries that are already more advanced in these school closures and who have already implemented a collective national shift to learning from home.

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<sup>1</sup> The ICSEA is calculated using Australian Bureau of Statistics data and draws on education, occupation, income, ethnicity, and location of student household (ACARA, 2015). Nationally, the mean ICSEA score is set at 1000 and one standard deviation from the mean is equal to 100. Schools with extreme disadvantage are scored around 700 with very advantaged schools scoring up to 1300.

# Impacts of "Learning at Home" for Vulnerable Children

There is a myriad of possible scenarios related to the impacts of transitioning to off-site learning for all learners but given the existing differentials for students from vulnerable backgrounds the risks are particularly cogent. Possible risks and difficulties particularly pertinent for this cohort are considered along with details of key learnings and/or strategies implemented in other countries.

## *Risk of Long-Term Educational Disengagement*

Student engagement, including cognitive, emotional and behavioural engagement, is central to effective learning, student success and wellbeing (Fredericks et al., 2004). Disengaged students are at risk of lower academic and poorer social outcomes, such as disruptive behaviour, and lower achievement and students from disadvantaged backgrounds are more likely to experience markers of disengagement (Hancock & Zubrick, 2015). Since many vulnerable young people already have a precarious relationship with education, there is a possibility that they may further disengage from learning if the curriculum content is only provided online (Burke & Dempsey, 2020). For many vulnerable children, school is not simply about cognitive engagement but also about behavioural and emotional engagement as well as connectedness (Fredericks et al., 2004). For children in care, or in low income households, or moving between parents, schools may provide the only constant in their lives and without the presence of routine and the essential pastoral "care" support that a school provides, students may turn away from learning permanently (Baker, 2020).

**Learnings from others:** The key response to the risk of educational disengagement seems to be the importance of communication and contact between the schools and families. A **recent Irish study** (April 1, 2020) reported on the social and relational impacts of their national school closure (Burke & Dempsey, 2020) reinforcing the need for schools to continually seek feedback from parents about the educational needs of the student, including their emotional status. In Ireland, many schools described adopting a more collaborative approach with families to design learning tasks and activities. Similar to a "students as partners" approach that is utilised within the university sector (Matthews, 2016; O'Shea., et al., 2020), the schools had engaged parents and children in designing and developing curriculum that was manageable within the home environment and also responsive to the particular needs of the learner. Similarly, in **Spain** a number of communication platforms and apps are available (e.g., *Edugestio*) through which teachers and parents/caregivers share and co-build the learning process. These initiatives echo two of UNESCO's 10 recommendations (See Appendix One) to ensure learning remains uninterrupted during the pandemic (UNESCO, 2020b), namely:

- prioritise solutions to address psychosocial challenges before teaching
- create communities and enhance connection.

## *Digital Inclusion*

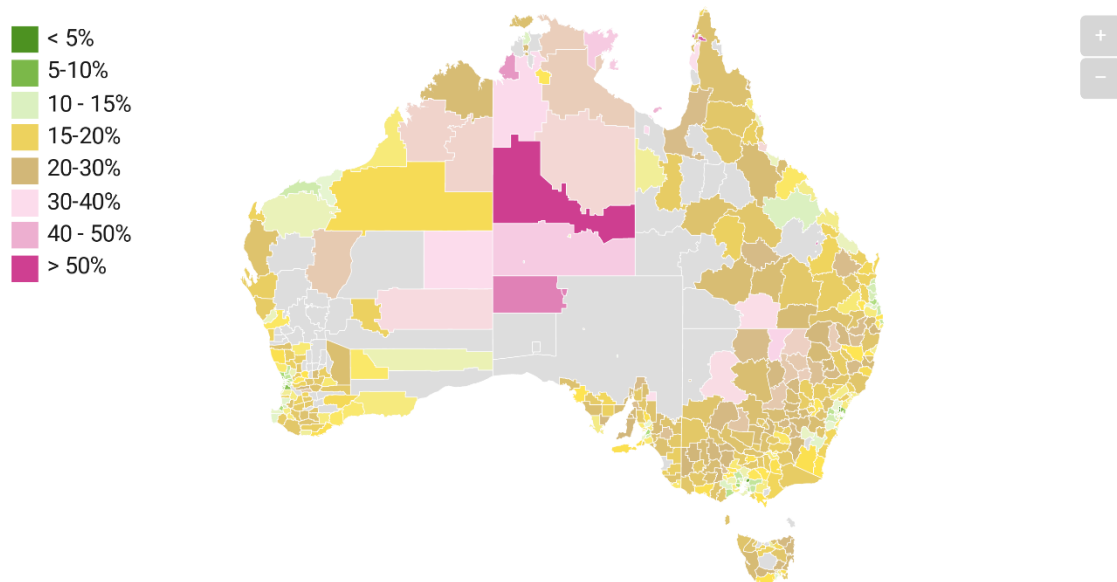
A digital divide exists between students from low and high SES backgrounds, with students from low SES backgrounds hindered by inadequate access to technology. The Australian Digital Inclusion index (ADII, 2019) measures three dimensions of digital inclusion, namely access, affordability and digital

ability and has reported annually since 2016 (Thomas et al., 2019). Although there is a gradual growth across these dimensions the scores of digital inclusion remain low in poorer households. Data from the Australian Bureau of Statistics (2018) indicate on average 13.2 per cent of households do not have internet with advantaged areas having more than 90 per cent of the population connected and disadvantaged areas having less than 40 per cent connected (See Figure 1). Around 471,600 households from the lowest quintile (i.e. the lowest 20 per cent of the population) of household income lack access to the internet and this is also compounded by lack of suitable devices for learning, for example, 621,800 households in the lowest quintile for household income do not have a laptop or desktop computer making learning online for students difficult (See Figure 2).

**Figure 1: Population without Internet access (ABS, 2018)**

## Percent of Population Without Internet

On average 13.2% of Australian households do not have internet access. The highest average is for South Australia where 17.4% of households lack internet access and the lowest average is for the ACT where only 6.5% lack internet.



*Note: Grey areas indicate no data; Data based on ABS Local Government Areas (LGAs)*

Map: Vernon • Source: ABS, 2018; 8146.0 – Household Use of Information Technology Australia, 2016-2017  
 • Map data: PSMA Australia Limited • Created with Datawrapper

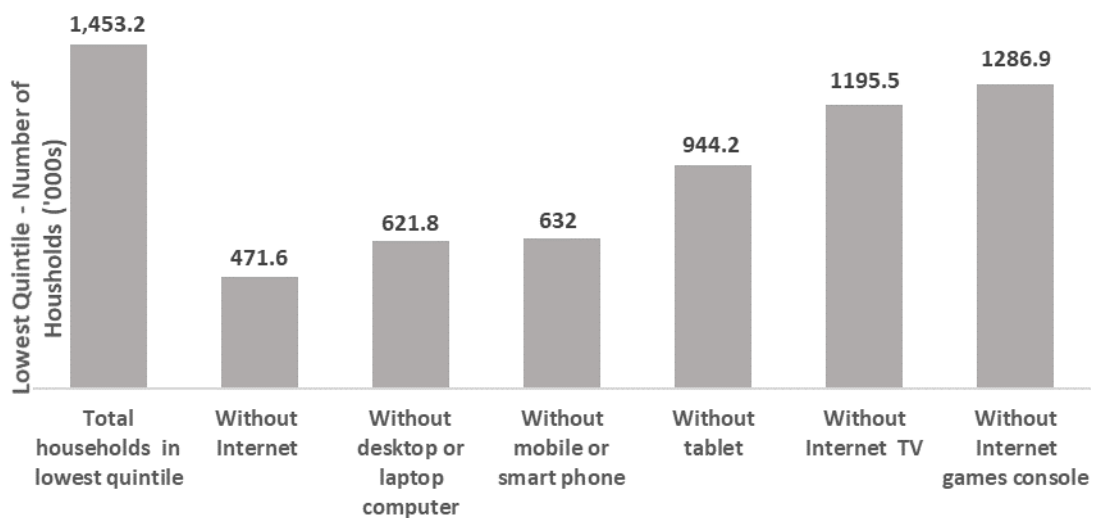
<https://datawrapper.dwcdn.net/CHx4K/3/>

The digital inclusion report indicates that the proportion of income required for internet spend has increased faster than increases in income, which has negative implications for those on lower or fixed incomes (Thomas et al., 2019), especially as an estimated 10 per cent of this population have lost their income since the pandemic. The report indicates that the share of household income devoted to internet services has increased from 1.00 per cent in 2014 to 1.18 per cent in 2019 (Thomas et al., 2019). However, many lower income households are only accessing the internet via mobile only plans (rather than fixed line). Mobile only plans typically have lower download limits and exceeding these limits results in additional costs. The use of only mobile plans is reported in 30.7 per



cent of households in the lowest income quartile, and is characterised by users with lower levels of education (28.0 per cent), and the unemployed (25.3 per cent) (Thomas et al., 2019). This is a multifaceted issue that not only relates to the ownership of hardware (i.e. laptops, computers) but also relates to: internet access, which may be limited; cost, placing further burden on households already under financial strain; or poor connectivity. Again, it is those students from more financially disadvantaged backgrounds that are more likely to encounter technology-related issues with resulting impacts for online learning from home.

**Figure 2: Information Technology Access for Lowest Quintile for Household Income (ABS, 2018)**



**Learnings from others:** To redress the digital divide, a number of countries point to the need to use a range of delivery modes and modalities during school closure. UNESCO (2020c) reports that during the Ebola crisis (2014) the impacted countries utilised a range of media to communicate lessons including online mediums, as well as radio and television. In **Portugal**, the government have endorsed a partnership between schools and post office services to ensure that hard copy teaching resources are delivered in a timely manner to homes. While the **New Zealand** (NZ) government recently announced the creation of two television channels to deliver educational content, combined with internet delivery and also hardcopy curriculum — the NZ government also provided NZ\$87.7 million in funding towards this endeavour. Similarly, on 12 April 2020, the **Queensland** government announced that curriculum would be delivered via television due to poor internet connectivity (Moore, 2020). The programming will include content targeted to engage parents and assist them in home schooling their children. It is the combined modalities that is notable in these approaches.

Rather than a total reliance on the internet, which we know is not available to all students across society, the use of a range of media to meet the differing needs of students is inclusive and may be effective for different student learning styles. The NZ government is also working closely with schools to enable the distribution of computer hardware and facilitate connectivity over time (an estimated 80,000 households in NZ do not have access to the internet). Senior school students have been prioritised for this rollout, with earlier school year levels following. These initiatives are also in line with UNESCO’s recommendation:

- examine the readiness and choose the most relevant tools.

Aside from using a range of modalities for delivery, a number of countries have provided loans of laptops or tablets including pre-paid dongles to assist with internet access (**China, France**). To assist in the practical application of online teaching, the **United Arab Emirates** has created a hotline for teachers and students to seek technical support if they face any technology difficulties whilst **Italy** is offering families access to online courses designed to assist in managing relationships whilst in confinement. These practices reflect the following UNESCO recommendations:

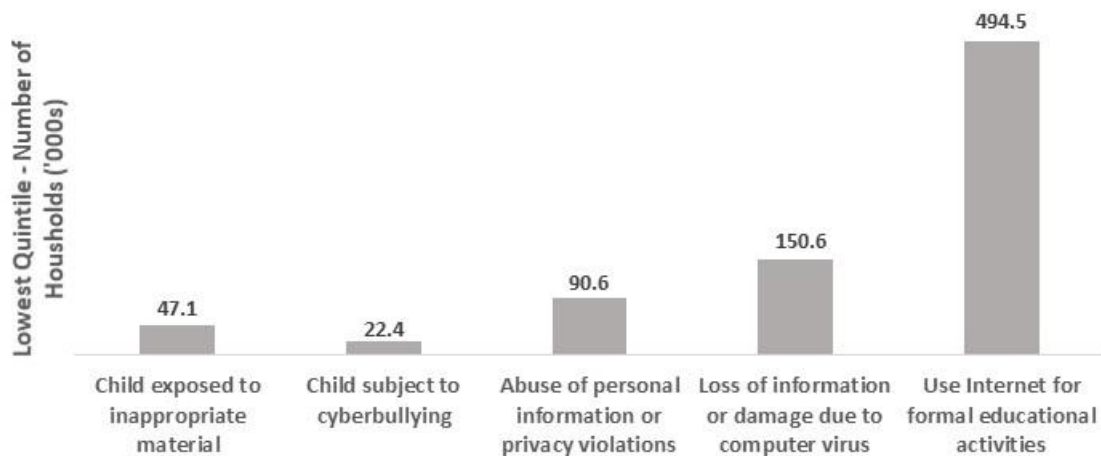
- ensure inclusion of distance learning programmes
- provide support to teachers and parents on the use of digital tools.

### *Technology Use*

Students have been exposed to varying degrees of technology integration within the education curriculum depending on their year level and the school they attend. However, misconceptions may exist around the level of technology proficiency of students more broadly. While young people are often assumed to be digitally "savvy", their use of technology is generally low-level and predominantly for entertainment and personal use, rather than for learning (Margaryan et al., 2011; Wang et al., 2014). Thus, young people may not meet the expectations surrounding isolated and dispersed learning online. Despite the emergence of debates around the expertise of the "net generation" or young "digital natives", who have grown up with technology enmeshed within their daily lives, researchers (Bennett et al., 2008; Margaryan et al., 2011) have recognised that the concept of a digital native is far from commonplace. Instead, the ways in which young people utilise technology is impacted by a range of resources or *capitals*: including financial, social and cultural (Bennett et al., 2008).

In terms of technology skill development, many young people lack the self-confidence to use a digital platform for learning, or have not yet developed the skills required to use technology in deep and critical ways, especially younger children (Thompson, 2013; Wang et al., 2014; Waycott et al., 2010). However, students from higher SES backgrounds are more likely to have acquired the necessary critical thinking skills associated with selectively accessing and assessing technology content (Perotta, 2013; Warschauer & Matuchniak, 2010). With increased use of technology for online learning during the pandemic, there is also a risk of children being exposed to cyberbullying, and inappropriate material (See Figure 3). For example, 47,100 families in the lower quintile for household income have children exposed to inappropriate material when online (ABS, 2018; See Figure 3).

**Figure 3 Technology Use for the Lowest Quintile of Household Income**



**Learnings from others:** Drawing on a survey conducted with principals/leaders in over 2,800 schools after three weeks of school closure, Burke and Dempsey (2020) reported the need for both delivery and structure of content to be contextualised according to different settings. Participants in this study recommended avoiding a "one stop shop" approach to delivery/content; recognising that bespoke approaches may be needed that combine modalities and also, reflect the priorities of the school (i.e. is the overarching goal to teach new content knowledge to learners or to revise existing content?). Low-tech options for delivery may also often be the best for households with limited connectivity — an email can be read off a phone and if the task is structured to incorporate resources that are likely to be available in and around the home, then learning can occur in a range of contexts.

A number of teachers and principals in this study also identified the need for the establishment of national guidelines that clearly detail the expectations to be placed on schools and families over the coming months. These guidelines need to be developed centrally (government or teaching peak body) and aim to ameliorate underlying fears that schools are somehow "failing" their students during this time of crisis (Burke & Dempsey, 2020). These approaches reflect UNESCO guidelines to:

- blend appropriate approaches and limit the number of applications and platforms
- develop distance learning rules and monitor students' learning process.

### *Emotional Wellbeing and Anxiety*

Disadvantage in the learning environment can be broad and varied — no child's experience is the same. While some students may not be technologically equipped to learn online, others may struggle to cope with the emotional challenges that off-site learning may bring. The emotional repercussions of a school closure cannot be underestimated. Psychological distress such as anxiety and depression amongst students may increase as students start to lose school connectedness, including a loss or lessening of the belief that both adults and peers in their school care about their learning as well as about them as an individual (Joyce & Early, 2014; Pikulski et al., 2020; Wingspread Declaration, 2004). Other implications may relate to emotional safety, with isolation denying some

children access to the one place they feel safe and nurtured — school. For parents, many of whom are experiencing the personal disruption of unemployment and financial disadvantage, psychological distress, which in some cases is also coupled with ineffective coping mechanisms, may be problematic (Caplan & Schooler, 2007; Puterman et al., 2009). There has been a collective recognition that expecting parents to assume the role of educator within the household can be an added burden to an already fraught situation (Burke & Dempsey, 2020; UNESCO, 2020b). Emotional support for both learners and their families is key and support should be outreaching and proactive to ensure that the families that are most impacted by this situation are managing emotionally, financially and logistically.

**Learning from others:** UNESCO (2020b) recommends that there must be solutions to address psychosocial challenges of the pandemic and this is a priority before teaching; describing the necessity to *"ensure regular human interactions, enable social caring measures, and address possible psychosocial challenges that students may face when they are isolated"*. Within Australia, one way to achieve this might be to utilise already developed student mentoring programs that have been established across the university sector. Organisations such as the Australian Indigenous Mentoring Experience (AIME) have over a decade of experience successfully mentoring young people in primary and high school settings (O'Shea et al., 2016); equally most universities have established e-mentoring programs that are designed to support prospective or commencing students (Jardine et al., 2016). Undergraduate (student) teachers can also assist schools in an online mentoring capacity, especially when they would usually be completing their intern practicums. Creating such online mentoring opportunities has the potential for reciprocal benefit for schools, students and the university undergraduate student teachers. There are also opportunities to draw upon existing trained university and community mentors to provide additional support to the school students similar to a distance homework club with advice and support offered via a variety of modalities (both online but also via phone). The Department of Education WA has also flagged rolling attendance through the week so there is some reduced face-to-face attendance and for senior boarding students, there are discussions about a return to boarding school in order to complete the ATAR.

## Conclusion

The disruption to school access due to the COVID-19 pandemic needs to be well managed as it impacts four million students across Australia. Mass school closures present a risk of exacerbating existing educational inequities subjecting as many as one million vulnerable students to an increased risk of negative social, emotional and behavioural outcomes. Young people need a sense of stability amid rapid change to help them process, adjust and develop new strategies for coping with emerging and fluid contexts. For many children, schools provide this stability. There is an urgent need for a proactive and multifaceted response to address the educational needs of our most vulnerable students and avoid widening existing educational disparities. Australia can do well by following best practices already implemented in other countries and take advantage of the experience, knowledge and insights already gained.

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## APPENDIX One

UNESCO, (2020a). 10 recommendations to ensure that learning remains uninterrupted. Available from: <https://en.unesco.org/news/covid-19-10-recommendations-plan-distance-learning-solutions>)

- 1. Examine the readiness and choose the most relevant tools:** Decide on the use high-technology and low-technology solutions based on the reliability of local power supplies, internet connectivity, and digital skills of teachers and students. This could range through integrated digital learning platforms, video lessons, MOOCs, to broadcasting through radios and TVs.
- 2. Ensure inclusion of the distance learning programmes:** Implement measures to ensure that students including those with disabilities or from low-income backgrounds have access to distance learning programmes, if only a limited number of them have access to digital devices. Consider temporarily decentralizing such devices from computer labs to families and support them with internet connectivity.
- 3. Protect data privacy and data security:** Assess data security when uploading data or educational resources to web spaces, as well as when sharing them with other organizations or individuals. Ensure that the use of applications and platforms does not violate students' data privacy.
- 4. Prioritize solutions to address psychosocial challenges before teaching:** Mobilize available tools to connect schools, parents, teachers and students with each other. Create communities to ensure regular human interactions, enable social caring measures, and address possible psychosocial challenges that students may face when they are isolated.
- 5. Plan the study schedule of the distance learning programmes:** 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. Plan the schedule depending on the situation of the affected zones, level of studies, needs of students needs, and availability of parents. Choose the appropriate learning methodologies based on the status of school closures and home-based quarantines. Avoid learning methodologies that require face-to-face communication.
- 6. Provide support to teachers and parents on the use of digital tools:** Organize brief training or orientation sessions for teachers and parents as well, if monitoring and facilitation are needed. Help teachers to prepare the basic settings such as solutions to the use of internet data if they are required to provide live streaming of lessons.
- 7. Blend appropriate approaches and limit the number of applications and platforms:** Blend tools or media that are available for most students, both for synchronous communication and lessons, and for asynchronous learning. Avoid overloading students and parents by asking them to download and test too many applications or platforms.
- 8. Develop distance learning rules and monitor students' learning process:** Define the rules with parents and students on distance learning. Design formative questions, tests, or exercises to monitor



closely students' learning process. Try to use tools to support submission of students' feedback and avoid overloading parents by requesting them to scan and send students' feedback.

**9. Define the duration of distance learning units based on students' self-regulation skills:** Keep a coherent timing according to the level of the students' self-regulation and metacognitive abilities especially for livestreaming classes. Preferably, the unit for primary school students should not be more than 20 minutes, and no longer than 40 minutes for secondary school students.

**10. Create communities and enhance connection:** Create communities of teachers, parents and school managers to address sense of loneliness or helplessness, facilitate sharing of experience and discussion on coping strategies when facing learning difficulties.