

# Challenges to education during the COVID-19 pandemic: A SIDS perspective with special reference to the situation in the Maldives

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*In the wake of the COVID-19 pandemic, which emerged in 2019 in China, countries worldwide have been grappling with the numerous challenges required of them to protect their citizens and respond to the consequences of multiple lockdowns on the global economy and their education systems. The devastating socio-economic impact is apparent worldwide, but Small Island Developing States (SIDS) have been identified as some of the most vulnerable contexts. In this paper, we build on the international literature and discourse on SIDS, giving special consideration to the context of the Maldives. We highlight the challenges to providing education in this Indian Ocean nation and the disproportionately negative impact of lockdown conditions on students' learning. In the light of original field research carried out with school principals, teachers, students, and parents, we identify and discuss how learners and schools coped with a rapid change to online schooling. In doing so, we highlight what has been achieved and how the pandemic has contributed to the widening disparity between urban and rural schools. Our findings point to the importance of SIDS governments having contingency plans in place to manage education in socially just and equitable ways during emergencies.*

*Keywords: Maldives; education; remote learning; social justice in education; COVID-19; small island developing states*

## **INTRODUCTION AND BACKGROUND TO THE STUDY**

Research on small states and Small Island Developing States (SIDS) often highlights the developmental and educational challenges they face. Such studies have been led and supported by the Commonwealth, whose membership comprises 32 small states out of its total constituency of 54 member states. Since the 1992 United Nations Conference on Environment and Development held in Rio de Janeiro, Brazil, the UN has recognised 58 SIDS and territories worldwide and identified them as a distinct group (UN, 1992). SIDS are especially vulnerable to global economic and environmental disasters due to their smallness, remoteness, and limitations of land area, populations, and resources. These features have attracted much official development aid for SIDS; however, external agencies often ignore the distinctive nature of the developmental challenges faced in such contexts (Baldacchino & Bray, 2001; Crossley, 2010). When internationally inspired initiatives do not translate well to the local context, there is a tendency for real needs to be marginalized and for existing national disparities to widen. As such, it is essential to pay attention to the “idiosyncrasies associated with smallness” (Baldacchino, 2012, p. 16) and to the need for greater contextual sensitivity (Crossley & Sprague, 2012; Crossley & Louisy, 2019) in progressing development within these countries.

In this paper, we build on the literature and discourse on small states, especially the SIDS, giving special consideration to the context of the Maldives. We particularly explore how the COVID-19 pandemic unfolded and the associated challenges to the education sector in the Maldives. We identify and discuss how the learners and schools coped with the change to online learning, highlighting the widening disparity between urban and rural schools in the country. This paper also explores possible future directions for the education system in the Maldives, advocating for the importance of considering contextual sensitivities in determining educational priorities, especially in planning for emergencies for SIDS such as the Maldives. Such consideration is critical for a socially just and equitable approach to education.

### **Small island developing states**

The SIDS were recognised as a unique group and one with distinctive environmental and development challenges at the Earth Summit of the United Nations Conference on Environment and Development (UNCED) in 1992. There are different definitions of small states and SIDS in the literature. These definitions focus on various aspects, such as smallness in population size, geographical remoteness and dispersion, increased fragility and vulnerability to economic and exogenous shocks such as natural disasters and climate change (Atchoaréna et al., 2008; Asian Development Bank, 2015). SIDS are diverse in nature, being found in three main regions of the world: the Caribbean; the Pacific; and the Africa, Indian Ocean, Mediterranean and South China Sea. Nevertheless, they face common developmental challenges that require special support from the global and international community (Office of the High Representative for the Least Developed Countries, 2011). As such, many SIDS are economically dependent on foreign capital, mainly through tourism, foreign aid, and commodity exports. All economies experience external and internal shocks, but their impact is felt much more in lower-income SIDS (Asian Development Bank, 2015). That is not to say that SIDS have failed to demonstrate their strengths and resilience in the face of their unique developmental challenges and collectively raised their voices at a global level. For example, the Prime Minister of Barbados, Honourable

Mia Amor Mottley, has pointed to SIDS as the most sensitive to dysfunction in the international order (Ewing-Chow, 2020).

In researching the context of the Maldives, Di Biase (2016) points out that there are opportunities created through the smallness of SIDS that tends to unite the citizens through a “particularistic culture” where strong social bonds and relationships play a significant role in day-to-day life (Didi, 2015; Soobratty, 2016). However, for most SIDS, advances in technology have not fully resolved the problem of distance from major markets, which isolates their economies from potential trading partners. Remoteness is also a disadvantage in relation to domestic connectivity due to high transport costs and limited access to international and domestic markets (Asian Development Bank, 2015).

### **Small island states and the COVID-19 pandemic**

The COVID-19 pandemic brought about unprecedented disruption to the global economy. Most small states depend heavily on tourism and remittances. Any economic shock is magnified in small states because of their narrow domestic markets, which rely heavily on international trade for growth (UNCTAD, 2020). Similarly, these countries face a higher debt burden than most developing countries (World Bank, 2021a). Real GDP in many small states was forecasted to contract as a result of the pandemic by double digits compared to an overall 5.2% worldwide, with countries reliant on tourism predicted to suffer the most profound declines (World Bank, 2021a). Economic contraction comes with high social costs, particularly in job losses. For example, the estimated GDP loss ranged from 4% in Trinidad and Tobago, 20.3% in Barbados, 26% in the Bahamas (Kallo et al., 2020), to 28% in the Maldives (World Bank, 2021a). In the Maldives, approximately 22,000 local payroll employees of resorts were affected directly due to COVID-19 resort closures (*The Edition*, 2020).

In order to manage these economic losses, the necessity to plan for an uncertain future is apparent in the context of COVID-19. The reality is that if the lockdown measures had not been taken, the consequences of the pandemic could have been more devastating for many SIDS than the economic losses they suffered given their limited health infrastructure and resources. Thus, most small states have, arguably, proven their resilience by imposing strict isolation strategies and offering quarantine facilities, followed by cancellation of flights and closure of borders to their tourism industries. Further, the measures that many small states have taken demonstrate significant contextual sensitivity in their response to the pandemic. For example, the Caribbean pooled its resources as a collaborative regional response and implemented a series of measures to mitigate the impact of the pandemic on their social and economic sectors (Morgan, 2020). However, in the absence of such a regional small state collaboration, the Maldives had acted alone in its response to the pandemic, following the playbook of other developed neighbours and political allies. While reporting fewer cases of their own, almost all SIDS took similar precautionary measures in closing down all schools following the onset of the pandemic.

Most countries shifted “overnight” to various forms of distance or remote learning mechanisms to ensure continuity of learning during the first lockdown. Remote learning occurs when students and teachers are not physically present in a traditional classroom environment. In such cases, teachers adopt online or e-learning where various forms of internet-based learning environments and digital technologies are used to conduct asynchronous or synchronous lessons. Unlike remote learning, distance learning does not require students to attend any synchronous lessons but, rather, uses asynchronous

mechanisms and/or reliance on content delivered by broadcasted lessons on TV or printed materials delivered in the mail. Not all countries had the infrastructure for remote learning methods of online schooling, especially in remote locations. For example, in a study about access to remote learning among Nigerian students during the pandemic, Azubuiké et al. (2021) found that disadvantaged populations had limited access to electricity and technology infrastructure. Some SIDS, including the Maldives, used broadcasting media of state television and radio and remote learning methods of online schooling via the learning management system provided by Google Workspace as a means to continue schooling during the pandemic.

However, this magnitude of change in schooling modalities was unexpected and has brought disruption in education systems across the globe (OECD, 2020). Most SIDS had to develop contingency plans to attend to the situation (Food and Agriculture Organization, 2021). These countries also adopted various approaches to remote learning and achieved various outcomes, as demonstrated by recently published studies. For example, in Trinidad and Tobago, where the population is characterized by multi-ethnic and multicultural class stratifications, and where equity and quality of education have been a constant challenge, the shift to online teaching and learning increased disparities (Kalloo, et al., 2020). Kalloo, et al (2020) stated that approximately 20% of the total school population between 3 and 18 years old did not have the necessary hardware or social support to access online education. According to Peimani and Kamalipour (2021), the rapid changes to online education also affected teachers because the digitization of school pedagogy left many with limited professional support. Along similar lines, a study by Dayal and Tiko (2020) on SIDS in the Pacific revealed that while many teachers were flexible and open to adjusting their teaching materials to online learning, they were emotionally distraught with concerns about their students and their own personal and professional well-being. These examples demonstrate that the impact of the pandemic on the education system in most SIDS has been devastating.

However, there is some hope that help will be provided through actions such as those taken by the UN Secretary-General António Guterres in May 2020, in which he called on governments and donors to prioritize education for all children, including the most vulnerable. As a result of his call, a Global Education Coalition was established to support governments to strengthen distance and remote learning and facilitate the reopening of schools (UNESCO, 2020). In such attempts to re-establish education systems and strategies across the world, the focus has to be on building socially just communities (UNESCO, 2021).

### **The impact of COVID-19 pandemic on social justice and education in SIDS**

The COVID-19 pandemic is deepening the inequities in education systems worldwide, magnifying issues of social justice in communities and exposing the severity of their impact on students' learning (Hernández et al., 2021). Social justice here refers to “participation and representation of all people and especially those who belong to more vulnerable groups” (Hernández et al., 2021, p. 3). As Fraser (2008) identifies, the institutional and systemic barriers that affect social justice are: redistribution, recognition and participation. According to Tikly and Barrett (2011), such a conceptualization of social justice provides a way of thinking about the quality of

education rooted in individual freedoms and the role of education for fostering capabilities that move beyond simplistic human capital and rights approaches.

As already noted above, the lockdown conditions and school closures exacerbate already-existing disparities worldwide (Stiglitz, 2020). Inequities include access to resources and the availability of learning opportunities and infrastructure. According to UNESCO (2021), due to the pandemic, more than 1.6 billion children and youth were not able to attend school for months, and many were not even back in school once lockdown was lifted. Such disruptions in schooling mostly impacted children from low-income countries such as SIDS.

In particular, the pandemic has been a painful experience for SIDS, such as the Maldives, because it has magnified the digital divide across the dispersed and marginalized communities (Shareef et al., 2010). The OECD defines the digital divide as “the gap between individuals, households, businesses and geographic areas at different socio-economic levels with regard to both their opportunities to access information and communication technologies (ICTs) and to their use of the internet for a wide variety of activities” (OECD, 2008, p. 139). Pandemic-related changes in schooling modality have increased this digital divide, as the need for ICT-related resources became more prominent than before. Limited access to ICT resources and skills, and the capacity of parents to assume the role of teachers at short notice further disadvantaged the already vulnerable communities (López et al., 2021). These conditions created further issues of social injustice in relation to education across many countries.

### **COVID-19 and the impact on the Maldives education system**

The Republic of the Maldives is a SID nation located off the southern tip of India. The Maldives is a geographically dispersed clusters of 26 atolls comprising 1,192 islands, of which 187 are inhabited, and 115 are tourist resorts. The country’s population of 491,589 residents is unevenly distributed, with approximately one-third of the population residing in the capital, Malé (National Bureau of Statistics, 2018). The Maldives was classified as a low-and-middle-income category in 2011 and, in 2021, moved to an upper-middle-income country (Asian Development Bank, 2015; World Bank, 2021b). Less than 2% of the Maldives population live below US\$1.25 per day, which is a similar number to the poverty level found in Jamaica and the Seychelles. Nevertheless, the challenge to ensure that the fruits of economic development are spread to all income groups, especially Maldivians living on the outer atolls, continues. The government continues to seek solutions to address the inequalities between Malé and other atolls. One such initiative was the implementation of a targeted policy called *Population and Development Consolidation* to address the disparity in access to infrastructure, social services and employment opportunities. However, the success of such efforts depends heavily on the policies and capacity of government and on the sustainability of the country’s economic performance.

In the Maldives, the majority of schools are public, with community and private schools being in the minority (Di Biase, 2019). Enrolments at schools vary from 50 students to more than 2,000 students, with most high enrolment schools located in Malé (Ministry of Education, 2019). Allocation of government resources to schools depends mainly on

*Challenges to education during the COVID-19 pandemic: A SIDS perspective with special reference to the situation in the Maldives*

student enrolment numbers. Some funds, though limited in nature, are raised by the community (Fikuree, 2020).

Over 91,000 students in the Maldives were affected by the outbreak of COVID-19 in March 2020 because schools across the country were closed for three months (Ministry of Education, 2020). To ensure continued learning, the government decided to conduct classes via televised lessons (*Telikilass*) and Google Classroom (UNICEF, 2021). Schools gradually opened from July 2020, adopting a blended approach to teaching and learning in which students attended school for four hours for in-person learning while continuing their online classes, though primary schools in Malé continued online classes until the end of 2020 (UNICEF, 2021). Table 1 shows the timeline of these events.

**Table 1: Timeline of events in the Maldives during the first wave of Covid-19**

February 2020	07/02 First confirmed positive case of Covid-19 in the country
March 2020	12/03 Declared State of Public Health Emergency in the country (SPHE) 14/03 Activities of universities, colleges and other academic institutions suspended 15/03 <i>Telikilass</i> for secondary grades (9 to 12) initiated 16/03 Ministry of Education (MoE) in collaboration with the Maldives Police Service launched a handbook for parents on cyber security 17/03 A nationwide shutdown on all activities except essential services. 21/03 Mandatory quarantine for 14 days for all passengers entering the country. 24/03 AS Level examinations scheduled for May/June postponed to Oct/Nov. 27/03 The Bank of Maldives introduced a student loan moratorium for 6 months from March 2020
April 2020	01/04 School-based training to use Google Workspace for teaching initiated 2000 teachers gained Google Certification with financial support from the UNICEF 02/04 MoE teamed up with Cambridge University Press to facilitate access to e-books 07/04 'Fila' portal established to access MoE digital content 15/04 <i>Telikilasses</i> paused The first case of community transmission confirmed in the capital Malé 21/04 MoE's Department of Inclusive Education issued guidelines to support SEN students' learning 29/04 MoE announced the postponement of local-school-exit examinations, Cambridge GCE and IGCSE O Level examinations
May 2020	20/05 Maldives Education Response Plan (ERP) formulated
June 2020	15/06 <i>Telikilass</i> for all grades resumed Schooling via Google Classroom and Google Meet started
July – December 2020	School curriculum adapted to cater to the ongoing changes in learning modalities Face-to-face classes resumed on 1st July for grades 9 and 10 Face-to-face classes for other grades started gradually As cases resurged, in-person classes changed to online classes <i>Telikilass</i> continued during this time

The shift in school modality increased usage of mobile telephones and access to the internet and social media platforms. The fortuitous distribution of Android tablets to more than 80% of the students at public schools in 2018 potentially enabled the continuation of schooling during the pandemic (Sosale et al., 2020). Unfortunately, the distribution was not combined with sufficient teacher support around the pedagogic praxis for use of the Android tablets. As a result, the potential for learning using such devices had not been explored by the time COVID-19 affected the country.

Consequently, the transition to online teaching was difficult for teachers. With support from UNICEF, teachers were provided with training in the use of Google Workspace for online teaching, with Google Classroom being the online platform recommended for remote learning by the Ministry of Education (MoE). The training was provided to 42.5% of primary and secondary teachers in government schools from July to November 2020, resulting in teachers gaining Google Certified Educator status (UNICEF, 2021). This training supported the continuation of learning for over 54,218 students. As part of the government's immediate action to tackle the ongoing crisis, an Education Response Plan (ERP) was also formulated early in March 2020, identifying the impact on education arising from the pandemic. In addition to controlling the spread of the virus, the ERP focused on enabling the continuation of schooling and developing a response plan to mitigate learning loss and identifying ways to support the most vulnerable and least accessible populations. The response plan aimed at determining the impact on all students, including those with Special Education Needs (SEN), teachers (local and expatriate) and the education system at large (Ministry of Education, 2020). As with other SIDS, the Maldives has always relied on assistance and support from regional, subregional, and international donors. As such, the ERP also assisted in applying for donor aid to overcome short-term and long-term learning loss caused by the twin shocks of school closure and economic recession due to COVID-19, which could have severe long-term costs to the education and development of the Maldives (Ministry of Education, 2020).

## **METHODOLOGY**

This article comprises four sub-studies, each examining one of the stakeholder perspectives regarding the change to the online medium of schooling due to the COVID-19 pandemic. The stakeholders who participated in the four studies were principals, teachers, students, and parents in the Maldivian schools. Cross-sectional surveys were conducted for secondary school teachers, Key Stage 3-5 students, and parents of Key Stage 1-2 using Google Forms to collect data. The study involving the principals of island schools was a qualitative study that used an open-ended questionnaire and follow-up interviews. All three surveys included closed and open-ended questions, and the participants were from across the country. All the teachers (secondary grades), parents (primary grades), and students (secondary and higher-secondary grades) were invited to complete the respective survey form. From those invited, 702 teachers, 7,568 students, and 2,905 parents completed the survey, which is a response rate of 19.2%, 38%, and 11.3% respectively. The study included seven principals, who were purposefully selected from a diverse range of geographical and population size schools and regions in the Maldives. The selected schools had enrolment numbers ranging from 200 to 1,500. All the studies focused on the challenges

in online learning faced by the stakeholders during the COVID-19 pandemic. Table 2 summarises the four studies.

The data from the four studies were analysed simultaneously, generating quantitative and qualitative data (Creswell, 2012). While quantitative data were analysed using Statistical Package for the Social Sciences software (SPSS 24), qualitative data were analysed using NVivo and thematic analysis (Braun & Clarke, 2013). Merging the qualitative and quantitative data enhanced the mapping of the overarching themes.

**Table 2: Snapshot of the design of the four studies**

<b>Study participant and sample size (percentage response from each population category)</b>	<b>Instrument</b>	<b>Data analysis method and tool used</b>
Students (38%)	Google survey	Statistical analysis using SPSS and thematic analysis using NVivo
Teachers (19.2%)	Google survey	Statistical analysis using SPSS
Parents (11.3%)	Google survey	Statistical analysis using EXCEL pivot tables
Principals (from seven schools across the Maldives)	An open-ended questionnaire with follow-up interviews	Thematic analysis (Braun & Clark, 2013)

## **FINDINGS**

In this findings section, we discuss the challenges different stakeholders (teachers, students, parents, and principals) in the Maldives faced with the sudden shift to remote and online learning during the COVID-19 lockdown.

### **Preparedness**

Results from the parent survey showed that most parents believed there was an overall lack of preparation for the online medium of schooling. Of the parents, 61% believed that the schools were not prepared, 53.8% thought that the government was not prepared, and 58.8% of parents believed that they were themselves unprepared. Further, 60.9% of the parents noted that it took them a week to a month to prepare themselves and their children for online schooling. However, an alarming 6.1% of parents said that even six months into the change to online schooling, their children were still unable to join online classes due to various issues, such as limited internet connectivity or non-availability of devices.

The analysis of teachers' level of preparedness from the teachers' survey showed that there were disparities in the amount of training teachers at different Key Stages received for online teaching. For example, percentages of teachers who received some form of



preparatory professional development for online teaching were as follows: Key Stage 3 (grades 7 and 8), 81.1%; Key Stage 4 (grades 9 and 10), 76.8%; and Key Stage 5 (grades 11 and 12), 54.2%. Interestingly, 80% of teachers reported that online training was made mandatory for them by the school and MoE.

### Learning and resources

An inability to access the internet was one of the barriers to online teaching and learning. The survey data reveals that 11% of students could not participate in online lessons because they did not have access to the internet. Another barrier to online learning was that 6.9% of students did not have their own devices, such as tablets, and 17.8% of students had difficulty using the device. Access to devices and the internet varied across the regions. Table 3 shows the disparity of available resources in the regions. The data was further explored for significant difference in the availability of these resources. A chi-square test revealed significant differences in the availability of these resources in the different regions, with the capital city, Malé, having more access to both internet and devices than the other regions.

**Table 3: Student access to internet and devices by region from student data**

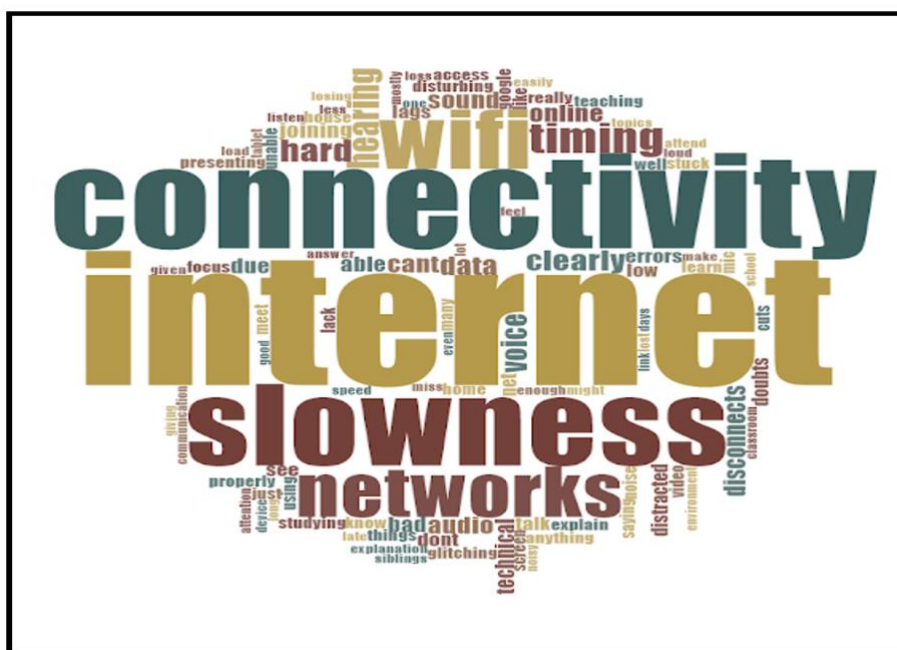
Region	Access to internet		Access to device (either own or MoE provided)	
	No	Yes	No	Yes
Malé	4.8%	95.2%	4%	96%
North	19.8%	80.2%	7.8%	92.2%
Central	13.0%	87.0%	8.2%	91.8%
South	14.5%	85.5%	7.3%	92.7%

Further, the principals study showed limited learner engagement in online classes, which led to decreased motivation for learning. The parent survey revealed that 67.5% of the parents received the 5GB of data provided by the MoE for their children. However, over half of the parents noted that the data was not enough, or the internet speed was too slow for online schooling; 50.46% of parents in the survey said their children used the tablets provided by the MoE and 15.49% of students used mobile phones to access online education. Only 33% of parents reported that they were able to provide their children with a private space in their house. Further, 57.8% of parents thought the amount of schoolwork given was just about right, 54.8% expressed the view that their children were submitting all of their schoolwork. The biggest challenge reported was slow internet connectivity, which affected the availability of resources for online teaching.

Of the teachers surveyed, 27.4% reported they had limited study space in their homes, 75.1% of the teachers used their own devices, and the remainder used borrowed devices (23.1% borrowed from schools; 1.8% borrowed from elsewhere). Further, 38.7% of the teachers reported that online teaching accrued an additional financial cost.

Figure 1 is a word cloud generator illustrating the frequency with which the concern was expressed. For instance, out of 6,720 students who responded to the question on

difficulties they faced during online classes, 34% raised internet connectivity, and 11% mentioned slow wi-fi, among other challenges.



**Figure 1: Word cloud-generated graphic showing issues encountered by students during online classes**

### **Technology and teacher training**

Concerning the usefulness of the training that teachers received to support their online teaching, 54.4% of the teachers believed that the training they received was informative and 55.9% of the teachers reported that the training sessions were easy to understand. Nearly all the surveyed teachers agreed that these training sessions were relevant in a practical sense for their online teaching preparation. However, 6.4% of teachers reported that the training was too technical and confusing, and 51.2% reported that they had less than a week to prepare for online teaching. Conversely, teachers' agency in their learning was visible in the survey analysis because most teachers reported that they taught themselves how to teach online, and their high level of familiarity together with the online platform's user-friendliness enabled such learning.

### **Coping**

Issues of mental well-being and stress are inevitable during a prolonged pandemic such as the COVID-19 pandemic. From the parent survey, 50.1% reported that they struggled to cope with the changes and support their children's online classes. A similar number of parents (52.1%) felt overwhelmed (stressed and confused) attempting to balance their work and personal life while also raising their children. Sixty-two percent of parents worried that their children's emotional and behavioural problems had increased. The parents' concerns seemed valid as most of the students also reported that they had experienced mixed emotions when online learning began, including being confused and stressed.

## **DISCUSSION**

The findings from these studies highlight several challenges that the Maldivian school education system is facing due to the changes in schooling during the COVID-19 pandemic. These challenges are discussed in the next section.

### **Widening of existing disparities**

An alarming theme common across all the sub-studies is the evidence of disparities in preparedness for online schooling between regions. Some schools and regions, such as those in the capital city, Malé, were better prepared because of their existing resources. Existing disadvantages experienced by the outer islands were further exacerbated when the government required all schools to close schools, even on islands without any reported cases, because of uncertainties associated with the pandemic. In effect, in its decision-making, the government failed to recognise contextual disparities among groups, a necessity especially on education-related matters (Crossley, 2010). Contextual sensitivities would have paid attention to local-island circumstances, enabling recognition and participation in decision making – both being critical components of social justice (Fraser, 2008).

The disparity in the availability of resources between the capital Malé and the outer islands is an existing challenge to the provision of quality education across the country (Asian Development Bank, 2015; Fikuree, 2020). The disparities were also evident in all four studies, with all participants noting that the unequal distribution of school resources among islands was a major challenge. In particular, the principal study revealed that some schools did not have basic facilities, such as a library, access to wi-fi, or a computer room. This lack of availability of basic facilities may have hindered students' learning in these marginalized schools and potentially widened already-existing inequities and disparities in the education system. According to Goede (2020), the COVID-19 pandemic has revealed and magnified systemic vulnerabilities in many countries worldwide. Thus, to move towards a socially just approach in a post-pandemic world, it is imperative to consider the redistribution of educational resources for remote learning.

### **Expanding the digital divide**

The four studies highlight that the digital divide between the capital city, Malé, and other atolls, as identified by Shareef et al. (2010), has also negatively impacted online schooling. It is evident from these studies that the availability of resources, such as internet facilities and digital devices, is unbalanced and asymmetrical, despite measures taken by the government to mitigate the situation. It was not feasible for the students to put on their video or take synchronised classes on some remote islands because of poor internet connections. Further, for both teachers and students, the limited availability of digital devices, together with limited ICT competency, compounded the negative impact of the online schooling experience. Similar findings have been reported by Kalloo et al. (2020), who found that when there are limited resources to support teaching and learning, the quality of education becomes compromised. The digital divide also poses challenges for parents, who are required to facilitate their children's online learning without training or support. Thus, in order to reduce the digital divide, the availability and accessibility of sound technology infrastructure in all schools, irrespective of their

size or geographical location becomes critical. Such a mechanism for redistributing resources paves the way for recognition and equitable participation in education (Tikly & Barrett, 2011).

### **Adequacy of technology-based teacher education**

The immediate response to the shift to online teaching was supported by the training of teachers in Google Workspace, which most teachers found useful and user-friendly. This aligns with the findings of Kakoulli-Constantinou (2018). Their acknowledgment of Google Workspace training as informative and relevant for online teaching during the COVID-19 pandemic implies that the decision to use Google Workspace as the main platform for schooling was the most appropriate solution for the situation. This may be because teachers had already had some brief online training in Google Workspace in 2017 (Ministry of Education, 2020).

However, some teachers highlighted that the training was too technical and confusing, and thus negatively affected their preparedness for online teaching. Psteimani and Kamalipour (2021) reported similar findings from the Welsh experience where teachers' level of preparedness was limited, making them uncertain about how to implement online classes. Such findings suggest that one-off training may be insufficient and challenging, especially for teachers who are not tech-savvy. Hence, in addition to Google Workspace training, the teachers in the current study had to teach themselves and seek help from their more competent colleagues. This finding is consistent with that of Parsons et al. (2019), who stated that technology-based professional development needs to be continued over time to be effective. It also indicates the need for incorporating pedagogies for digital technologies in the provision of teacher professional learning and development. Hernández et al. (2021) argue that such pedagogically focused professional development can pave the way towards social change and equity.

The majority of participants in the teacher survey pointed out the lack of time available for online teaching preparation. Even though technology integration in school education started in the Maldives in 2017, professional development provided for the teachers nationwide was limited, making the pandemic-related online teaching a new experience for many. Despite the challenges to online schooling under lockdown measures and in the face of a looming pandemic, teachers in the Maldives were hopeful and optimistic about the new schooling model. Such positivity is also evident in that teachers sought professional support through their informal networks and through family support to develop their online teaching skills and resources. Such informal networks were facilitated by small, tight-knit communities that are common in and between the Maldivian islands (Di Biase, 2016; Didi, 2002). Further, as Di Biase (2016; 2019) points out, problems posed by geographical dispersion in the Maldives islands are often overcome through the heavy usage of mobile phones. This particularistic culture (Didi, 2002), where social bonds and family connections and networks play a critical role in various aspects of community life, is a unique feature in SIDS. The spread of positive attitudes among the citizens during the unprecedented crisis of COVID-19 can be attributed to this feature.

### **Limited focus on mental well-being**

The significant changes in everyday life brought about by the COVID-19 pandemic led many people to report they experienced elevated levels of anxiety, depression and stress (Kelman et al., 2021). Parents who were forced to become teachers “overnight” were likely to be far more mentally stressed by the stay-at-home order, especially if also living in small, crowded spaces, such as those that exist in the capital city, Malé. Further, concerns felt by parents around their children’s learning and social development seemed to exacerbate their stress amidst the uncertainties associated with the global pandemic. Teachers also reported high levels of stress and concerns regarding their own well-being as well as that of their students. Similar sentiments concerning personal and professional life during the COVID-19 lockdown were expressed by early childhood teachers in some Pacific SIDS (Dayal & Tika, 2020).

For SIDS, environmental uncertainties and climate change affect health and well-being and act as a multiplier for stress affecting the health and livelihood of its people (Pan American Health Organisation, 2018). Also, in most SIDS, social stigmatization of mental ill-health is prevalent, and inadequate health systems limit support for mental health diagnoses and treatment (Kelman et al., 2021). Given the circumstances in SIDS, the increase in mental well-being issues due to the pandemic, if not attended to in the post-pandemic recovery approaches, could magnify social inequities in these communities.

### **RECOMMENDATIONS**

This study showed that the Maldives, like many other SIDS, face many challenges to future education due to factors highlighted by the COVID-19 pandemic. Most of these challenges stem from the existing inequities in its systems, attributed to being a small state and which, due to the pandemic, have become more prominent than ever. The challenges include the availability of infrastructure and resources, training teachers, providing support for online learning and addressing the mental well-being of all stakeholders. The recommendations provided in this study may be helpful for other similar contexts seeking to work towards socially just and equitable provisions of education.

The most important recommendation is that schools provide blended (online and face-to-face) learning opportunities to ensure that teachers and students are prepared for unprecedented situations that do not allow students to physically attend schools. These measures are more significant for SIDS, such as the Maldives, because increasing student participation by minimizing existing disparities would open opportunities for redistributing teaching and learning resources. Thus, such mechanisms of social justice in any contingency plan for schooling are critical. Such planning will help to minimize learning loss and improve student retention because marginalized and vulnerable students could then learn online if they cannot attend school. Blended forms of schooling can also help to overcome geographical barriers that challenge the provision of quality education for many SIDS. Given the vulnerable situation SIDS are in, blended learning needs to be the norm in the post-pandemic era to ensure that schools are in an advantageous position to move to remote learning quickly and smoothly if need be. Further, stemming from the success of the use of *Telikilass* demonstrated through this study, it is imperative that such alternative mechanisms of schooling are

explored as a way to minimize existing disparities that limit students' participation in schooling.

We also recommend that the government ensure the availability and accessibility of sound technology infrastructure in all schools, irrespective of their size or geographical location. This includes establishing a feasible and sustainable mechanism for distributing technology devices for all teachers and students and equal and affordable internet access for all students for continuing online teaching and learning. The MoE needs to formulate an ICT policy to facilitate the schools' technology integration initiatives.

Finally, we suggest that teacher education institutions in the Maldives ensure that all teachers who complete initial teacher education programs have the technological and pedagogical knowledge to conduct effective lessons using digital technologies. Further, schools need to provide in-service teachers with ongoing professional learning and development opportunities focused on digital technologies in online teaching and learning. Schools also need to establish ways to explore and address the mental health and well-being of teachers, students and parents.

Pivotal to all these recommendations is the need for human solidarity and for establishing better communication mechanisms among all stakeholders. We need to harmonize all our efforts to provide education for future generations and use evidence-based planning in local and global policymaking while at the same time bringing principles of social justice to the centre of global conversations (Habib, 2021).

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### **REFERENCES**

- Asian Development Bank. (2015). *Maldives overcoming the challenges of a Small Island State: Country diagnostic study*. Retrieved from <http://www.adb.org/sites/default/files/publication/172704/maldives-overcoming-challenges-small-island-state.pdf>
- Atchoaréna, D., Da Graça, P. D., & Marquez, J. M. (2008). Strategies for post-primary education in small island developing states (SIDS): Lessons from Cape Verde. *Comparative Education*, 44(2), 167-185. <https://doi.org/10.1080/03050060802041076>
- Azubuiké, O. B., Adegboye, O., & Quadri, H. (2021). Who gets to learn in a pandemic? Exploring the digital divide in remote learning during the COVID-19 pandemic in Nigeria. *International Journal of Educational Research Open*, 2(2), 100022.

- Baldacchino, G. (2012). Meeting the tests of time: Small states in the 21st century. *Current Issues in Comparative Education*, 15(1), 14-25.
- Baldacchino, G., & Bray, M. (Eds). 2001. Human resource strategies for small states. [Special issue]. *International Journal of Educational Development* 21(3).
- Braun, V., & Clarke, V. (2013). *Successful qualitative research: A practical guide for beginners*. Sage.
- Brock, C. (1984). *Scale, isolation and dependence: Educational development in island developing and other specially disadvantaged states*. London: Commonwealth Secretariat.
- Cover-Kus, H. (2020). Pandemic in paradise: The challenges and future prospects of the tourism industry. <https://thecommonwealth.org/media/news/pandemic-paradise-challenges-and-future-prospects-tourism-industry>
- Creswell, J. W. (2012). Educational research: Planning, conducting, and evaluating quantitative and qualitative research. In *Educational Research* (Vol. 4). <https://doi.org/10.1017/CBO9781107415324.004>
- Crossley, M. (2010), Context matters in educational research and international development: Learning from the small states experience. *Prospects*, 40(4), 421-429.
- Crossley, M., & Louisy, P. (2019). Commonwealth small states, education and environmental uncertainty: Learning from the sharp end commonwealth small states, education and environmental uncertainty: Learning from the sharp end. *The Round Table*, 108(4), 459-471. <https://doi.org/10.1080/00358533.2019.1634885>
- Crossley, M., & Sprague, T. (2012). Learning from small states for post-2015 educational and international development. *Current Issues in Comparative Education*, 15(1), 26-40.
- Dayal, H. C., & Tiko, L. (2020). When are we going to have the real school? A case study of early childhood education and care teachers' experiences surrounding education during the COVID-19 pandemic. *Australasian Journal of Early Childhood*, 45(4), 336-347. <https://doi.org/10.1177/1836939120966085>
- Di Biase, R. (2016). *Investigating active learning reform in the Small State of the Maldives: What works and under what circumstances?* [PhD thesis, The University of Melbourne, Australia].
- Di Biase, R. (2019). Moving beyond the teacher-centred/learner-centred dichotomy: implementing a structured model of active learning in the Maldives. *Compare: A Journal of Comparative and International Education*, 49(4), 565-583. <https://doi.org/10.1080/03057925.2018.1435261>
- Didi, A. (2002). Towards a performance appraisal scheme for teachers and headteachers in the Maldives. In G. Baladacchino & C. Farrugia (Eds.), *Educational planning and management in small states: Concepts and experiences* (pp. 109-117). London: Commonwealth Secretariat.
- Ewing-Chow, D. (2020, March 31). *Exploring the unique impact of Coronavirus on small island developing states*. Forbes.

*Challenges to education during the COVID-19 pandemic: A SIDS perspective with special reference to the situation in the Maldives*

- Fikuree, W. (2020). *Leadership task effectiveness and student achievement: Perceptions of principals, deputy principals and lead teachers*. [PhD thesis. The University of Auckland].
- Filho, W. L., Lütz, J. M., Sattler, D. N., & Nunn, P. D. (2020). Coronavirus: COVID-19 transmission in Pacific small island developing states. *International Journal of Environmental Research and Public Health*, 17(15), 1-8. <https://doi.org/10.3390/IJERPH17155409>
- Food and Agriculture Organization (2020). *Small Island Developing states response to COVID-19: Highlighting food security, nutrition and sustainable food systems*. <http://www.fao.org/documents/card/en/c/ca8994en/>
- Fraser, N. (2008) *Scales of justice: Reimagining political space in a globalizing world*. Cambridge: Polity Press.
- Goede, M. (2020). COVID-19 and change. *Archives of Business Review*, 8(7), 311-369.
- Habib, A. (2020). Knowledge and partnerships for social justice. *NORRAG Special Issue, Knowledge*, 106, 74-78.
- Hernández, A. S. J., Cáceres-Muñoz, J., & Martín-Sánchez, M. (2021). Social justice, participation, and school during the covid-19: The international project gira por la infancia. *Sustainability*, 13(5), 1-20. <https://doi.org/10.3390/su13052704>
- Kakoulli-Constantinou, E. (2018). Teaching in clouds: Using the G-Suite for education for the delivery of two EAP courses. *Journal of Teaching English for Specific and Academic Purposes*, 6(2), 305–317.
- Kalloor, R. C., Mitchell, B., & Kamalodeen, V. J. (2020). Responding to the COVID-19 pandemic in Trinidad and Tobago: Challenges and opportunities for teacher education. *Journal of Education for Teaching*, 46(4), 452-462. <https://doi.org/10.1080/02607476.2020.1800407>
- Kelman, I., Ayeb-Karlsson, S., Rose-Clarke, K., Prost, A., Ronneberg, E., Wheeler, N., & Watts, N. (2021). A review of mental health and wellbeing under climate change in small island developing states (SIDS). *Environmental Research Letters*.
- López, E., Muñoz, & Menchaca-López, E. (2020). Assisting students and families during the COVID-19 crisis: Diversity and equity in action through an educator-family-community health worker intersection. *Northwest Journal of Teacher Education*, 15(2), 0-5. <https://doi.org/10.15760/nwjte.2020.15.2.10>
- May, J. F., & Riyaza, F. (2017). Maldives population dynamics. <https://www.prb.org/maldives-population-dynamics/>
- Morgan, K. (2020). *Call to action for CARICOM education Ministers: COVID-19 and education*. <https://today.caricom.org/2020/04/16/call-to-action-for-caricom-education-ministers-covid-19-and-education/>
- Ministry of Education. (2019). *School Statistics*. Malé, Maldives.
- Ministry of Education. (2020). *Maldives education response plan for COVID-19*. Malé, Maldives.



- Murphy, M. M., Jeyaseelan, S. M., Howitt, C., Greaves, N., Harewood, H., Quimby, K. R. Hambleton, I. R. (2020). COVID-19 containment in the Caribbean: The experience of small island developing states. *Research in Globalization*, 2, 100019. <https://doi.org/10.1016/j.resglo.2020.100019>
- National Bureau of Statistics. (2018). *Statistical pocketbook of Maldives 2018*. <http://statisticsmaldives.gov.mv/nbs/wp-content/uploads/2019/01/Statistical-Pocketbook-of-Maldives-2018-Printing.pdf>
- Nilamadhab Kar, Brajaballav Kar, Shreyan Kar, (2021) Stress and coping during COVID-19 pandemic: Result of an online survey. *Psychiatry Research*, 295.
- OECD. (2008). *OECD glossary of statistical terms*.
- OECD. (2020). *Schooling disrupted, schooling rethought: How the Covid-19 pandemic is changing education*. [https://globaled.gse.harvard.edu/files/geii/files/education\\_continuity\\_v3.pdf](https://globaled.gse.harvard.edu/files/geii/files/education_continuity_v3.pdf)
- Office of the High Representative for the Least Developed Countries, L. D. C. and S. I. D. S. (UN-O. (2011). *Small island developing states: Small island big(ger) stakes*.
- Pan American Health Organisation. (2018). *Climate change and health in small island developing states: A WHO special initiative in collaboration with UNFCCC and the Fijian presidency of the COP-23, SIDS in the Caribbean region*. <https://www.paho.org/es/file/50600/download?token=xjLlKVQx>
- Parsons, S. A., Hutchison, A. C., Hall, L. A., Parsons, A. W., Ives, S. T., & Leggett, A. B. (2019). US teachers' perceptions of online professional development: Teaching and teacher education. *An International Journal of Research and Studies*, 82(1), 33-42.
- Peimani, N., & Kamalipour, H. (2021). Online education and the COVID-19 outbreak: A case study of online teaching during lockdown. *Education Sciences*, 11(2), 72. <https://doi.org/10.3390/educsci11020072>
- Shareef, M., Ojo, A., & Janowski, T. (2010). Exploring digital divide in the Maldives. In *What kind of information society? Governance, virtuality, Surveillance, sustainability, resilience* (pp. 51-63). Springer.
- Sosale, S., Aturupane, H., & Aedo, C. (2020). *Amid COVID-19, Maldives keeps children learning through remote education*. Retrieved from <https://blogs.worldbank.org/endpovertyinsouthasia/amid-covid-19-maldives-keeps-children-learning-through-remote-education>
- Stiglitz, J., (2020). Point of View: Conquering the Great Divide. *Finance & Development*, 57(003).
- Mohamed, S., (2020). Over 45,000 resort employees directly affected by pandemic. *The Edition*. <https://edition.mv/report/17091>
- Tikly, L., & Barrett, A. M. (2011). Social justice, capabilities and the quality of education in low income countries. *International Journal of Educational Development*, 21(1), 3-14.
- UN. (1992). *United Nations Conference on Environment & Development Rio de Janeiro, Brazil, 3 to 14 June 1992: AGENDA 21*. <https://sustainabledevelopment.un.org/content/documents/Agenda21.pdf>

*Challenges to education during the COVID-19 pandemic: A SIDS perspective with special reference to the situation in the Maldives*

- UNCTAD. (2020). *The least developed countries report 2020: Productive capacities for the new decade*. United Nations.
- UNDP and The Ministry of Finance and Treasury. (2014). *Maldives human development report 2014-bridging the divide: Addressing vulnerability, reducing inequality*. <https://doi.org/ISBN:978-92-1-126340-4>
- UNESCO. (2015). Small island developing states. *Education for All Global Monitoring Report*. <https://doi.org/10.1002/wcc.84>
- UNESCO. (2020). Global education coalition. <https://doi.org/10.1002/wcc.84>
- UNESCO. (2021). Education: From disruption to recovery. <https://en.unesco.org/covid19/educationresponse>
- UNICEF (2021). *UNICEF Education: Reimagine education case study Maldives: Building teachers' confidence and capacity to provide online learning*. <https://www.unicef.org/media/92551/file/Building%20teachers%E2%80%99%20confidence%20and%20capacity%20to%20provide%20online%20learning.pdf>
- World Bank. (2021) *The world bank steps up support to small states in response to COVID-19 pandemic*, April 2, 2021. <https://www.worldbank.org/en/news/press-release/2021/04/21/world-bank-steps-up-support-to-small-states-in-response-to-covid-19-pandemic>
- World Bank. (2021a). *The world bank in the Maldives*. <https://www.worldbank.org/en/country/maldives/overview>
- Wilkinson, E. (2020). Covid-19: A lesson in leadership from the Caribbean. <https://odi.org/en/insights/covid-19-a-lesson-in-leadership-from-the-caribbean/>



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