Japan
Case Study
Situation Analysis on the Effects of and Responses to COVID-19 on the Education Sector in Asia
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Japan
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Situation Analysis on the Effects of and Responses to COVID-19 on the Education Sector in Asia

October 2021
October 2021

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ISBN 978-92-9223-668-7 (UNESCO)

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TH/C4-6217/QE/21/038-JP
The pandemic caused a major children’s rights crisis: all service sectors being profoundly impacted, with the most disadvantaged being disproportionately affected.

COVID-19 – possibly the largest pandemic the world has ever seen - led to an economic crisis probably more radical and global than ever before; as well as disruption of learning on an unprecedented scale. The pandemic caused a major children’s rights crisis: all service sectors being profoundly impacted, with the most disadvantaged being disproportionately affected.

In response, with support from the Global Partnership for Education, UNICEF and UNESCO joined forces with Mott MacDonald, Cambridge Education to carry out a situation analysis, primarily to generate analyses to inform strategic responses to the crisis going forward. While the extension and duration of the pandemic required to invest more time to produce the final analyses and reports, fortunately information had already been discussed through webinars and national conversations with Ministries of Education and other partners across large parts of the Asia Pacific region.

Furthermore, the reports continue to be of utmost relevance given subsequent waves of COVID-19 sweeping across the world in 2021 and very likely in 2022 as well. The task of learning from the crisis and how to mitigate its effects in education is on-going. More than one academic year has now been lost for many children. To ensure continuity of learning whilst schools are closed, the delivery of education is radically changing today through distance education: digital, blended or hybrid learning have become part of the new learning reality which all Governments, teachers and learners will have to adjust to.

While major efforts are needed to mitigate the learning loss of those children who return to school in the post-COVID-19 recovery phase, we must also remember that many children were not learning before the crisis and several million were not even in schools. The reports therefore also explore opportunities to build back better and to re-imagine education; to shift from fact-based didactic methodologies to competency-based approaches, which are more flexible, better respond to the holistic needs and aspirations of all children, and provide opportunities for life-long learning as per the Sustainable Development Goals (SDG) 4 agenda.

While the suite of reports provided within the Regional Situation Analysis are particularly relevant to the Asia Pacific region, contexts of course vary considerably across our huge region. At the same time, the reports may also provide insights that are relevant to other regions around the world. Hopefully the findings, including the country case studies, and regional budget needs analysis will help governments resume and accelerate progress towards SDG 4. The way education is conceptualized and delivered is changing fast, and the transformation journey will be steep and full of challenges. Governments, donors, all partners and the private sector will need to work together, not only to get the strategies and levels of investment right, but to build more resilient, effective and inclusive systems, able to deliver on the promise of education as a fundamental human right for all children, whether schools are open or closed.

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Contents

Foreword 5
Acknowledgements 8
List of acronyms 9
Executive summary 10
Country fact sheet 14

01. Introduction 16
   1.1 Background 17
   1.2 Methodology 18
   1.3 Structure of the case study 18

02. Effects of and response to COVID-19 on the education sector in Japan 20
   2.1 Country background 21
   2.2 Effects of and response to COVID-19 against four dimensions 22
   2.3 Main challenges faced by the education sector 26

03. Thematic deep dive: the GIGA school project in Japan 28
   3.1 Japan’s digital readiness: Pre-COVID-19 ICT capacity 29
   3.2 Japan’s readiness to respond during school closure 32
   3.3 Japan’s engagement in the GIGA school project and the linkage with the global GIGA initiative 33
   3.4 Enabling equitable access to learning 35

04. Lessons learned 36
   4.1 Lessons learned 37
   4.2 Recommendations 37
   4.3 Conclusion 39

Endnotes 41
Tables

Table 1. The number of children enrolled in special needs education 22
Table 2. Students’ attitudes towards self-directed learning prior to the crisis 24
Table 3. Digital readiness of teachers and students prior to the COVID-19 pandemic (OECD, 2020) 30
Table 4. Types of learning media assigned by sampled schools during the COVID-19 pandemic (MEXT, 2020) 32

Figures

Figure 1. Three phases of school reopening 18
Figure 2. Four dimensions of analysis of effects 18
Figure 3. Illustration of the aims of the GIGA school project according to MEXT’s leave no one behind strategy 33

Box

Box 1. The global GIGA initiative 34
Acknowledgements

We would like to sincerely thank the following people who made valuable contributions to the development of this case study:

Ministry of Education, Culture, Sports, Science and Technology (MEXT) officials, for their coordination, translation support and informative responses;

Representatives from the ITU and GIGA programmes, Alex Wong, Atsuko Okuda, Sean Doral and Sophia Farrar, who provided additional context and understanding of the international objectives of the GIGA initiative;

Robert Parua, Programme Specialist and Tianzhou Zhao, Programme Officer from the UNESCO Beijing Office for their valuable comments;

Nyi Nyi Thaung, Programme Specialist and Amalia Miranda Serrano, Project Officer from the UNESCO Bangkok office, Akihiro Fushimi, Education Specialist and Dominik Koeppi, Education in Emergency specialist from the UNICEF East Asia and Pacific Regional Office (EAPRO), Emma Hamilton-Clark, Knowledge Management Consultant from the UNICEF Regional Office for South Asia (ROSA) for providing comments in the finalization of this document;

Ivan Coursac, Education specialist/Economist from the UNICEF Regional Office for South Asia (ROSA) for expertly leading this rapid Situation Analysis of the effect of COVID-19 in the education sector in Asia;

Emma Mba, Cambridge Education Project Director, Sue Williamson, Cambridge Education Team Leader, and Kate Martin, Cambridge Education Senior Education Advisor and main author for the report.

Finally, we also wish to express special appreciation to the Global Partnership for Education (GPE) for their financial contribution to the production of this report.
List of acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>COVID-19</td>
<td>Coronavirus disease</td>
</tr>
<tr>
<td>EAPRO</td>
<td>East Asia and Pacific Regional Office</td>
</tr>
<tr>
<td>ESD</td>
<td>Education for Sustainable Development</td>
</tr>
<tr>
<td>GIGA</td>
<td>Global and Innovation Gateway for All</td>
</tr>
<tr>
<td>ICT</td>
<td>Information and Communications Technology</td>
</tr>
<tr>
<td>IMF</td>
<td>International Monetary Fund</td>
</tr>
<tr>
<td>MEXT</td>
<td>Ministry of Education, Culture, Sports, Science and Technology</td>
</tr>
<tr>
<td>MHPSS</td>
<td>Mental health and psychosocial support</td>
</tr>
<tr>
<td>OECD</td>
<td>Organisation for Economic Co-operation and Development</td>
</tr>
<tr>
<td>PISA</td>
<td>Programme for International Student Assessment</td>
</tr>
<tr>
<td>TALIS</td>
<td>Teaching and Learning International Survey</td>
</tr>
<tr>
<td>UNESCO</td>
<td>United Nations Educational, Scientific and Cultural Organization</td>
</tr>
<tr>
<td>UNICEF</td>
<td>United Nations Children's Fund</td>
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Executive summary

Introduction

Japan has a population of over 126 million, which has been on the decline since 2010. As a high-income country, it has a large net migration towards urban centres and an aging population. Japan’s education system is mature, and catering for the vast majority of its student population in terms of both access and quality. As a member of the Organisation for Economic Co-operation and Development (OECD), Japan tracks its performance through participation in PISA (Programme for International Student Assessment), which shows above-average scores across reading, mathematics and science. The major discrepancies within Japan’s student population are known to arise from a socioeconomic status, and the gap between advantaged and disadvantaged students.

This case study is part of a series of reports across Asia commissioned by UNICEF and UNESCO to share lessons across countries. It outlines the effects of the COVID-19 pandemic on Japan’s education system, and deep dives into one particular pillar of Ministry of Education, Culture, Sports, Science and Technology’s (MEXT) response, namely its emphasis on improving the digital readiness of schools, staff and students through its own GIGA (Global and Innovation Gateway for All) School project. In addition, the Study shares some successes and lessons learned from MEXT’s response, followed by recommendations in the current context (in November 2020) for MEXT’s next steps.

The Study has been based on a literature review, as well as the completion of a questionnaire and follow-up questions with MEXT, UNICEF and the International Telecommunication Union (ITU).

The focus of this case study is:

1. MEXT’s Leave No One Behind approach, which provides a helpful model for the type of response all countries could usefully develop in emergency situations, and highlights the need to ensure that appropriate data, consultation and coordination informs such approaches; and

2. The Leave No One Behind approach emphasis, as one pillar of its response, on strengthening digital and remote learning approaches, which in turn builds upon MEXT’s 2016 Plan for the Rapid Digitalization of Education and their 2018 Five-Year Plan for the Digitalization of Education. The approach puts a spotlight on one aspect of this, which is the aforementioned GIGA, launched in 2019 and accelerated as a result of the COVID-19 pandemic. GIGA, which will be described in more detail below, addresses digital device and connectivity access issues in particular.
Effects and Responses

When the COVID-19 pandemic hit Japan in early 2020, MEXT took a phased approach to school closures, with some grades closing from 2 March. All grades then closed from 7 April, when a National State of Emergency was declared. All children were out of school for eight weeks, equating to 20 per cent of their usual instructional time per year. MEXT responded with a series of measures that are outlined in an approach that is encompassed in the ‘Education in Japan beyond the crisis of COVID-19 – Leave No One Behind’ leaflet. Ultimately, as a high-income country with very strong education indicators of good quality delivery, Japan had the capacity to initiate a multi-pronged and comprehensive response, spanning across both the eight-week period of school closures, but also well beyond into its planning once schools had reopened. This included the creation of the Children’s Learning Support website, a consolidated platform for education content covering all grades. The website has continued to be updated beyond schools reopening.

In broad summary, under the domains of the Study, some of the key observations included:

- Although MEXT’s response to school closure was swift and comprehensive, it remained focused on digital delivery. Since there is a lack of data on how many children have access to internet and digital devices at home – data from PISA 2018 indicates only 61 per cent of Japan’s students confirm access to a device they can use at home for schoolwork – it is difficult to evidence the extent to which such content was actually retrieved. This remains a gap in the evidence of MEXT for planning purposes;
- In addition, vulnerable children remain somewhat ‘invisible’ in MEXT’s response. While the overall numbers of out-of-school children, absenteeism of students, and children in ‘relative poverty’ (OECD definition) are recorded, more comprehensive understanding of the types of needs for these children, and specific measures to tackle these, are not outlined in MEXT’s approach;
- To tackle issues of staffing and burden on teacher capacity, the potential need for remedial and supplementary learning for students, and the additional safety requirements created by COVID-19, MEXT has budgeted and planned for such measures as relaxing qualification requirements to take on more teachers, placing more teaching staff at schools to cover supplementary learning needs, allocating nurses and specialized safety equipment to schools, and planning for additional sports, nature and cultural activities for students;
- Financially, Japan’s funding to the education sector is healthy, and above OECD average in gross terms. However, as a proportion of GDP expenditure on education is below the OECD average, which signals a concerning trend around prioritization of education, at a time when public budgets are likely to come under pressure due to the pandemic. Furthermore, Japan’s poverty rate stands at 15.7 per cent (OECD, 2015), which refers to people whose household income is less than half of the median of the entire population. Of these families, this equates to approximately 3.5 million children in relative poverty\(^1\). Given the pressure the pandemic may place on specific economic sectors, as well as the government’s ability to provide social support, this is concerning for such children and their education; and
- MEXT has committed over $4 billion to its COVID-19 response, across a range of measures outlined by the Leave No One Behind approach.

The challenges and emerging gaps facing Japan’s education sector, many of which are already being tackled in MEXT’s response, are summarized as follows:

- There are still a high number of children in poverty whose individual needs may be greater than their counterparts in terms of realizing their educational potential;
- There are additional costs for families when children are learning from home, which MEXT is so far redressing by targeting of low-income households for top-up payments towards communications costs, and waiving tuition fees when returning to school;
- There are some infrastructural weaknesses for digital connectivity, namely in terms of lack of data on the devices and access that children have at home, as well as the numbers of devices per child at schools;
- Japan’s teachers are below OECD-average in their use of and confidence with information and communication technology (ICT) in education;
- Japan has below-average rates of ‘self-belief’ among students, as compared to the OECD average, which MEXT is concerned will make children less resilient to the shocks of pandemics such as COVID-19, and impact their capacity to ‘take up’ different education approaches;
- Resources are being channelled to ensuring children can ‘catch up’ on learning through supplementary instruction and materials on their return to school, but if this is not possible, MEXT has plans for ‘special measures’, such as moving certain learning content to the following year. Data on this is not yet available;
- The potential impact of the pandemic on examinations and milestone years for students has not yet been assessed; and
- Japan has an ageing population, which is placing immense pressure on the working-age population, and in turn is leading the government to strategies involving artificial intelligence and robotics, which will in turn put pressure on education and skills-training systems to respond.
Deep Dive

The Study brings deeper focus to one particular challenge that Japan’s MEXT believes to be high priority: the ICT capabilities of Japan’s education system and GIGA, which MEXT decided to prioritize and accelerate as a result of COVID-19. Many of the challenges outlined above feed into this specific area focus, as is elaborated in Chapter 3.

Despite exceptionally strong indicators for education access and quality, like every other country in the world Japan has faced the unprecedented impact of the pandemic. Children’s ‘access’ to learning has changed according to the infrastructure and support that they could expect in their home environment, and the ongoing support of the school system once they returned to school.

In Japan, 39 per cent of students reported no computer at home to use for schoolwork.4 A lack of access to the internet or ICT devices and literacy to benefit from connectivity ‘means exclusion, marked by the lack of access to the wealth of information available online, fewer resources to learn and to grow, and limited opportunities for the most vulnerable children and youth to fulfil their potential’.5

Therefore, there is an elaboration on where Japan was in relation to capacity to deliver distance learning through ICT during the pandemic, but also more broadly, in terms of its own long-term strategy to improve the digital readiness of teachers and students. The Study has found that pre-pandemic data indicates reasons to be concerned about the numbers of children able to access online content during school closure, as well as teacher capacity to deliver through this modality. Furthermore, there are indications that Japan’s education system still has a long way to go to reach its own goals for full ICT capacity in schools, and to future-proof the country’s workforce through a move into robotics and artificial intelligence.

This is the foreground for MEXT’s introduction of GIGA, which is receiving a large supplementary budget influx, topped up during COVID-19. The main focus of this budget is to provide one ICT device per student at schools, and the integrated preparation of high-speed, high-capacity ICT networks in schools. However, ICT must be understood as just one tool within a wider framework for how learning is delivered. There are two types of uses of ICT for learning described below – distance learning and blended learning. It is not enough to provide hardware and connectivity to students. Countries such as Japan must go beyond GIGA, or similar types of initiatives to promote connectivity and devices, with a more transformative vision to achieve equitable quality learning for all. This is at least partially recognized by MEXT’s approach of ‘digital readiness’, which emphasizes both the increase to device and connectivity access, through GIGA, as well as the need to improve confidence to use ICT among teachers and students. Recognizing that access to devices is not sufficient; the budget request for the 2021 fiscal year includes 427 million yen ($3.9 million) for creating online training programmes for teachers in how to use ICT in their lessons.

Lessons learned

The following major lessons have emerged from this Study:

1. MEXT managed a detailed planning and budgeting process in response to COVID-19, which is described in their ”Education in Japan beyond the crisis of COVID-19 – Leave No One Behind” leaflet. This approach, in a mature system such as Japan’s, has been pivotal in facilitating rapid coordination and allocations where needed;

2. A response that pulls together existing activities and builds on what is already in place enables a smooth transition to a different form of learning. Budgets have already been released and additional allocations made for 2021, which give initiatives such as GIGA a real opportunity to make a difference on the recovery and future resilience of children’s learning; and

3. Japan’s success lies in a very clear trajectory between identifying a problem and planning and resourcing for tackling it. In this case, MEXT saw digital literacy of teachers and students as an issue before the pandemic, as a result of its PISA results in 2018, and put in place specific policies and strategies to redress the digital literacy and infrastructure access of their teachers.


Recommendations

In response to the challenges elaborated in the findings and deep-dive observation, the recommendations for increasing resilience to future shocks are developed further in Chapter 4. Although they are not exhaustive given the scope of this short study, these suggest that MEXT considers the following priority measures:

1. Monitor the implementation and impact of the policies made during COVID-19 – those that are broadly encompassed in the ‘Leave No One Behind’ leaflet;
2. Ensure that resources continue to be targeted to disadvantaged children and those with special needs;
3. Use a variety of tailored and targeted assessment approaches to understand the needs of various students; and
4. Continue to scale-up GIGA across Japan, but ensure that this focuses holistically on all aspects of digital readiness, and not only infrastructure and user competence.

Conclusion

Considering the severe impact of the pandemic on the region, Japan’s ability to respond has been aided by its high levels of investment in education (in gross terms), as well as the maturity of its system. However, this Study has sought to delve deeper into some of the specific challenges facing Japan as a result of COVID-19. The purpose of this Study was:

- To assess and estimate the various impacts of COVID-19 on the education sector and stakeholders (children, adolescents, teachers, parents, education officials etc.); and
- To identify examples of promising responses and strategies in education and associated social sectors, which can be shared with other countries.

It has been clarified that there are a number of successes in MEXT’s response that have helped to minimize the adverse impact on students, families and teachers. During school closures, MEXT moved swiftly to provide online content through a single web platform covering all grades. Furthermore, as school reopened, the Leave No One Behind approach outlined a comprehensive set of measures for the safe reopening of schools and resumption of learning. This included guidance and additional equipment for safety measures at schools, combined with medical personnel deployed to support schools, and additional teacher capacity enabled through relaxing of qualification requirements. However, the impact of all of these measures, as well as tracking children’s experiences of learning during school closure, is not yet clarified in MEXT’s data, and thus it is not possible to evaluate where gaps and issues may continue, nor what initiatives have worked well and should be continued.

In addition, MEXT’s prioritization of digital readiness within the education sector, which precedes the COVID-19 pandemic, but which has been starkly thrown into the spotlight as a result of it, requires additional attention. The intense pressure put on students to perform well and to pass high-stake exams, has resulted in students with low levels of resilience and an inability to work independently. Furthermore, the readiness of teachers to deliver learning digitally, and student’s access to devices at home, further hamper the potential for this modality. Consequently, despite momentum behind MEXT’s GIGA project, this Study concludes the need for a wider strategy around it. This is the time to shift focus to a more inclusive and well-being-focused education system, and a blended learning approach that builds upon ICT as a tool but not as an end-in-itself, so that the system works for all children in the country.
Country fact sheet

The table below provides a snapshot of the pandemic, education sector response and background information for Japan.

<table>
<thead>
<tr>
<th>DIMENSION</th>
<th>INDICATOR/QUESTION</th>
<th>INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Epidemiology</strong></td>
<td>Date of first confirmed case</td>
<td>14 January, 2020</td>
</tr>
<tr>
<td></td>
<td>Date of first confirmed death</td>
<td>13 February, 2020</td>
</tr>
<tr>
<td></td>
<td>COVID-19 cases and deaths over time</td>
<td>As of 27 November, 2020, there have been 140,225 cases and 1,996 deaths in Japan.</td>
</tr>
<tr>
<td></td>
<td>Details about the pandemic and government responses and supports</td>
<td>All children were out of school for at least eight weeks in the second quarter of 2020. Accordingly, children missed approximately 20 per cent of their annual compulsory instruction time. MEXT responded with a cross-departmental approach to Leave No-one Behind, and schools allocated learning materials to students through an online platform (Children's Learning Support website) that provided online educational content for students from preschool to high school (videos, audio files, downloadable workbooks, useful links, materials for teachers, etc).</td>
</tr>
<tr>
<td><strong>School Closure</strong></td>
<td>Were schools closed, partially or fully?</td>
<td>Schools were fully closed between 7 April and 1 June, 2020.</td>
</tr>
<tr>
<td></td>
<td>Date of school closures</td>
<td>7 April, 2020</td>
</tr>
<tr>
<td></td>
<td>Date of school reopening</td>
<td>1 June, 2020</td>
</tr>
<tr>
<td></td>
<td>Have schools reopened fully or partially?</td>
<td>The process of closure and reopening was staged in Japan. As of 28 February, 2020, MEXT asked elementary schools, junior high schools, senior high schools, schools for special needs education and upper secondary specialized training schools to be temporary closed from 2 March, but left the decision to local governments. Initially, in late March, guidelines were issued by MEXT for reopening after Spring Break, but then a National State of Emergency was declared on 7 April, leading to national school closures. 98% of schools reopened from 1 June, 2020.</td>
</tr>
<tr>
<td></td>
<td>What phase is the country currently? Phase 1, 2 or 3?</td>
<td>Schools in Japan are now reopened and, therefore, should be collectively in Phase 3.</td>
</tr>
<tr>
<td><strong>Key Vulnerable Groups</strong></td>
<td>Key vulnerable groups affected by the impact of COVID-19 on the education sector</td>
<td>In 2017, 3.5 million children in Japan – one in six of those aged up to 17 – were in households classified as experiencing ‘relative poverty’ (OECD definition). Japan experiences rates of wealth inequality and child poverty that surpass most other developed nations – UNICEF ranked Japan 34th out of 41 industrialized countries on such indicators of inequality. Of the 3.5 million children who are eligible for state support, only 200,000 actually receive any. As of 2019, MEXT reports that there are 556,759 children with special education needs enrolled in schools in Japan, across all levels (preschool to upper secondary). 74% of these children are in mainstream schools, with specific resourcing to accommodate their other needs – see MEXT : Special Needs Education.</td>
</tr>
</tbody>
</table>
### Education System Structure

Brief description of the structure of the education system – federal or centralized

MEXT has this organizational chart: [https://www.mext.go.jp/en/about/organization/title01/detail01/1374476.htm](https://www.mext.go.jp/en/about/organization/title01/detail01/1374476.htm)

In total, there are over 2,000 staff members in MEXT.


The system is overall governed by:

- The Basic Act on Education – other educational laws and regulations are made in accordance with the aims and principles of this law;
- The School Education Law;
- The Social Education Law; and
- The Law Concerning Organization and Functions of Local Educational Administration.

### Pre-COVID-19 Progress Towards SDG4 Indicators

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Indicator/Question</th>
<th>Information</th>
</tr>
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<tbody>
<tr>
<td>Education System Structure</td>
<td>Out-of-school rate</td>
<td>• Primary out-of-school: 1.2% (2015) – although there is also the emergence of an interesting phenomenon known as “futoko”; which places children in ‘free schools’ and thus classes them as formally out-of-school, as well as a high rate of absenteeism for more than 30 days with over 160,000 children primary and junior secondary aged children, thus de-facto out-of-school8</td>
</tr>
</tbody>
</table>
|                    | Completion rate                         | • Primary enrolment: 98.8% (2015)9  
• Persistence to last grade of primary school: 99.98% (2016)10  
• Primary completion rate: 99.23% (2012)11 |
|                    | Minimum reading proficiency rate        | • Reading proficiency: overall reading proficiency, as measured by PISA, is good in Japan – in 2018, 15-year-olds in Japan scored 504 for reading as compared to the OECD average of 487. Looking also at ‘reading for pleasure’, which international evidence equates with positive impacts on children's learning outcomes: "children who read for pleasure made more progress in maths, as well as vocabulary and spelling, between the ages of 10 and 16, than those who rarely read." 12 13 In Japan, 80% of elementary and junior high schools and 50% of senior high schools are carrying out ‘morning reading’ (based on a survey conducted in June 2019 by the Morning Reading Promotion Association). Owing to such efforts, from 2010 and beyond, the percentage of children who do not read at all dropped to some 5%, 15% and 50% for elementary, lower secondary and upper secondary school students, respectively.14 |
01
Introduction
Some of the most susceptible children felt the side-effects of COVID-19 from the moment nationwide lockdowns were put in place to control its spread.

1.1 Background

The global nature of the COVID-19 pandemic makes it different, affecting the whole world with the twin shocks of a health emergency and an economic recession. This will lead to long-term costs on human capital accumulation, development prospects and welfare. The pandemic’s containment measures have disproportionally affected the most vulnerable and marginalized members of society. Some of the most susceptible children felt the side-effects of COVID-19 from the moment nationwide lockdowns were put in place to control its spread. Markets, workshops, farms and factories closed, leaving children and families stranded. For many, the fear and uncertainty continue. Some minorities find themselves stigmatized and accused of causing or spreading the virus, while deep-rooted inequalities in societies are being exposed.

With its huge population and overcrowded cities, Asia is potentially very vulnerable to COVID-19, which spreads through close contact with infected people. The contexts within which people of South Asia, South East Asia and East Asia are having to cope with the virus are vastly different, with a disparity in living conditions and varying degrees of access to, and quality of, essential services such as health and education. Across the continent there is vast inequality between rich and poor, and therefore different levels of resilience to the shocks that this disease has brought, putting the deprived at long-term risks far beyond contracting the virus. This region regularly suffers from calamities, which lead to localized learning interruptions. For example, during the pandemic, Philippines and Cambodia were in the path of a cyclone, and recent floods have threatened communities.

This Situation Analysis has been undertaken as part of the broader examination initiated by UNICEF and UNESCO, to provide a snapshot of the educational responses and effects of COVID-19 across Asia. It considers the direct effects of school closures and reopening, and identifies the initial impact that this may have on learners, their families, and the overall education system. In doing so, it aims to develop insight based on the variety of responses to the pandemic, with a view to assessing their efficacy in Asia. It seeks understanding on the contextual factors that may have supported or hindered learning, with particular attention on the most disadvantaged groups (who will be most affected by the pandemic). For this, the analysis has the following objectives:

- To assess and estimate the various impacts of the COVID-19 epidemic on the education sector and stakeholders in Asia;
- To examine policy and financial implications on progress towards achieving SDG4-Education 2030; and
- To identify examples of promising responses and strategies in education and associated social sectors, which can be shared with other countries.

The Situation Analysis identifies examples of effective country approaches, which could be replicated or adapted for use in other countries. Following the development of the case studies (including this Japan situation analysis), the overall study will include an overview of the situation in each of the three Asian sub-regions, and finally the region as a whole.
1.2 Methodology

The study includes an overview of the situation in each of these three sub-regions, with case studies providing a more in-depth look at specific areas in 14 countries. The case studies have been supported by the UNICEF and UNESCO offices in each country. They have provided relevant information and assisted the researchers to contact relevant officials to collect country-specific documents, grey literature and data that will help us tell the story of the COVID-19 disruption across Asia, its impact, and the responses of each education system.

In addition to a literature review, this case study involved the completion of a questionnaire and follow-up questions by the MEXT team, focusing on GIGA. Interviews with UNICEF and the ITU global GIGA representatives were also conducted, with the relationship between Japan and global GIGA initiatives clarified in Chapter 3. Though limited to a very small and specific set of stakeholders, these responses during interviews have provided an opportunity to learn more about the challenges faced, and the responses developed. It also provided a space for a discussion of lessons learned, and what still needs to be done. Note that responses highlighted in chapters below will be referenced as being from ‘respondents of the questionnaire’, because the responses were provided as a collective, and thus not attributable, to a single individual (refer to the Acknowledgements List).

A cross-cutting focus on the most vulnerable members of society, particularly highlighting girls and learners with disabilities, has been used across the case studies. The aim of this is to identify interventions, which have been able to successfully reach the most marginalized communities, and how their different needs were addressed to increase accessibility and participation for all.

1.3 Structure of the case study

The case studies are structured in four sections. After this introduction and the above country profile, Chapter 2 discusses the effects of COVID-19 on the education system against four dimensions (see Figure 2 below). Challenges are identified and then the responses are set out against the three phases of school reopening (see Figure 1 below), depending on the specific context of each case study country. Chapter 3 provides a deep dive into a particular theme, which was identified in each case study country by the UNICEF and UNESCO country teams. In the case of this study, this theme is the focus on MEXT’s comprehensive Leave No One Behind approach, as well as on the specific acceleration of Japan’s approach to ensuring digital capability and readiness of its students and teachers, as part of resilience to future shocks and preparedness for digital futures. Finally, Chapter 4 provides an overview of the lessons learned, providing specific recommendations for the case study country and other countries on building back better and increasing the resilience of the education system to future shocks.

![FIGURE 1 | THREE PHASES OF SCHOOL REOPENING](image)

- **Prior to reopening**
- **Reopening process**
- **Schools reopened**

![FIGURE 2 | FOUR DIMENSIONS OF ANALYSIS OF EFFECTS](image)

- Access to and participation in learning
- Safe operations
- Health, well-being and protection
- Finances
02
Effects of and response to COVID-19 on the education sector in Japan
This chapter looks at how COVID-19 has affected Japan’s education sector, and the responses that have been developed to mitigate these effects. In particular, the case study elaborates on why Japan has chosen to emphasize ICT and digital readiness in their education planning, as part of efforts preceding COVID-19, but which have been strengthened and accelerated by the pandemic’s impacts.

2.1 Country background

Japan has a population of over 126 million, which has been on the decline since 2010\(^5\). As a high-income country, it has a large net migration towards urban centres and an aging population. According to a recent report from the International Monetary Fund (IMF) (2020)\(^6\):

“Japan’s total population will continue to decline, after reaching a peak in 2010. The old age dependency ratio (measured as old-age population as a share of working-age group) has been on the rise – the ratio exceeded 40 per cent in 2014 and is expected to accelerate, reaching above 70 per cent in the next 50 years.”

This demographic trend is one potential influencing factor in the push for ICT in education, as will be elaborated below.

Japan’s education system is mature and catering for the vast majority of its student population in terms of both access and quality. As an OECD member, Japan tracks its performance through participation in PISA, which shows above-average scores across reading, mathematics and science. The major discrepancies within Japan’s student population are known to arise from socioeconomic status and the gap between advantaged and disadvantaged students. OECD reports that:

“The average difference between advantaged and disadvantaged students in reading is 72 points, compared to an average of 89 in OECD countries. However, 12 per cent of disadvantaged students are academically resilient [meaning they are performing well in spite of socio-economic adversity] (OECD average: 11 per cent)\(^7\).”

Furthermore, although the percentage of out-of-school-children in Japan is 1.2 per cent at primary level and ‘learning poverty’ is measured at 2.2 per cent, this is comparable to other high-income countries in the region, such as Singapore, and indeed lower than other high-income countries such as Australia and New Zealand.

Special Needs Education in Japan is carried out in various forms, including in resource rooms and special classes (both of which are in mainstream schools), as well as in in special schools: Schools for Special Needs Education. As of May 2019, the number of children/students registered in Special Needs Education are highlighted in Table 1.

According to the OECD (2014)\(^8\), Japan’s total public and private expenditure per student was high (in gross terms)\(^9\) among OECD countries, at $10,646 per student from primary through to tertiary education (in 2011). The OECD average at the time was $9,487. In 2019, the same above-average trends were observed, where primary education expenditure per child of primary education age in Japan was recorded at $8,839, which is 140.5 per cent above the average for the East Asia and Pacific region, and 5.1 per cent above the average for high income countries\(^10\). Nonetheless, the proportion of Japan’s public expenditure on education, as a percentage of overall GDP, is low at 3.6 per cent\(^11\), compared to the OECD average of 4.9 per cent\(^12\).
The response to the pandemic has been underpinned by the very comprehensive, and rapidly developed MEXT approach. The focus of this Study, therefore, is on:

- MEXT’s holistic response during COVID-19 through its Leave No One Behind approach\textsuperscript{23}. This approach provides a helpful model for the type of response all countries could usefully develop in emergency situations, with emphasis on ensuring that appropriate data, consultation and coordination underpins such approaches; and

- The emphasis of MEXT, preceding the COVID-19 pandemic, but accelerated by the impacts of the pandemic, on strengthening digital and remote learning approaches. This builds upon MEXT’s 2016 Plan for the Rapid Digitalization of Education and their 2018 Five-Year Plan for the Digitalization of Education. The Leave No One Behind leaflet shines a spotlight on GIGA, which addresses digital access issues in particular, and which is receiving increased funding as a result of the pandemic in preparation for greater resilience to future shocks.

<table>
<thead>
<tr>
<th>TYPE OF SPECIAL NEEDS EDUCATION SNE PROVISION</th>
<th>PRESCHOOL EDUCATION</th>
<th>ELEMENTARY EDUCATION</th>
<th>LOWER SECONDARY EDUCATION</th>
<th>UPPER SECONDARY EDUCATION</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schools for Special Needs Education</td>
<td>1,438</td>
<td>44,475</td>
<td>30,374</td>
<td>68,147</td>
<td>144,434</td>
</tr>
<tr>
<td>Special classes (in mainstream schools)</td>
<td>-</td>
<td>200,561</td>
<td>77,579</td>
<td>-</td>
<td>278,140</td>
</tr>
<tr>
<td>Resource rooms (in mainstream schools)</td>
<td>-</td>
<td>116,633</td>
<td>16,765</td>
<td>787</td>
<td>134,185</td>
</tr>
<tr>
<td>Total</td>
<td>1,438</td>
<td>361,669</td>
<td>124,718</td>
<td>68,934</td>
<td>556,759</td>
</tr>
</tbody>
</table>

### 2.2 Effects of and response to COVID-19 against four dimensions

#### Dimension 1: Access to and participation in learning

**Learning**

When the COVID-19 pandemic initially took hold and began to spread, MEXT took a phased approach to school closure. In February 2020, elementary, junior high and senior high schools, schools for special needs education, and upper secondary specialized training schools were asked to close temporarily from 2 March, although the decision was left to local governments on whether to proceed. Due to the rapid nature of this evaluation, information on the closures and reopenings of pre-schools/kindergartens was not considered. Only once a National State of Emergency was declared on 7 April did the government mandate national school closures. Ninety-eight per cent of schools reopened from 1 June, 2020, so that all children were out of school for eight weeks\textsuperscript{24}. As a result, children missed 176 hours of face-to-face compulsory instruction time (taking lower secondary school as a proxy), or approximately 20 per cent of their annual compulsory instruction time. Therefore, schools, in coordination with the authorities, staff and parents, mobilized during this period to fill the gap with online learning and home schooling facilitated by teachers and parents. As reported by respondents to the study questionnaire:

| TABLE 1 | THE NUMBER OF CHILDREN ENROLLED IN SPECIAL NEEDS EDUCATION |
“MEXT launched an online platform (Children’s Learning Support website) and provided online educational content. The portal site includes learning content for students from preschool to high school (videos, audio files, downloadable workbooks, useful links, materials for teachers etc). The content was collected from various sources, both from government sources and private sources (e.g., publishing companies, private education companies, education TV channels, museums etc.). The content is organized by subject and by grade, but also organized by topic (e.g., how to make face masks). Though schools reopened in June, the portal continues to evolve with new content being added regularly.”

Furthermore, the MEXT leaflet indicates the intention for schools to support ‘students’ learning by offering supplementary instruction to children who have not yet fully retained the target content’. (It was not yet elaborated during interviews as to how the assessment of learning gaps has/is taking place to meet with this target). A relatively modest budget was allocated by MEXT to ensure ‘catch-up’, and examination years, in particular. Although it is laudable that resources were targeted initially towards crucial transition moments in education, global evidence suggests that all children lost a proportion of their normal learning cycle. The evidence emerging internationally cautions on the long-term impacts that this can have, especially for children with difficulties in accessing and taking-up distance learning modalities. Although schools were only closed for eight weeks, and holidays were shortened to make up for this time loss, it is nonetheless likely that some students will have fallen behind in their learning due to a lack of access to digital learning modalities, and other challenges related to accessing and digesting learning content while out of school. This likelihood is compounded by MEXT’s confirmation that there is a lack of data on the devices and access that children have at home, as well as the numbers of devices per child at schools (which are off-track on Japan’s own goals for one child to one device at school). Table 3 on page 30 shows data from PISA 2018 and indicates only 61 per cent of Japan’s students confirm access to a device they can use at home for schoolwork. Furthermore, as highlighted in the Country Fact Sheet above, at least 1.2 per cent of primary-aged children are out-of-school, over 160,000 children are absent for more than 30 school days per year (which classifies them as out-of-school), and over 3.5 million children live in ‘relative poverty’. Such children were not accessing learning at all, or potentially were under disadvantaged conditions, prior to the pandemic. The move during COVID-19 towards reliance on digital learning, and on parents and communities to support children with learning, places additional pressure on an already difficult situation for these children.

Furthermore, in terms of the digital readiness of teachers and their ability to provide continuous education support during the pandemic, which is elaborated in the deep dive in Chapter 3, the OECD’s 2020 Country Report “Education during COVID-19: were teachers and students ready?” indicates that Japan’s teacher force falls below OECD country averages on those that reported using ICT in classrooms, and being able to support student-learning using digital technology, pre-pandemic. The survey also highlighted Japan as being at the bottom among OECD member countries for such questions as the ‘use of computers for joint work with other students’.

Therefore, the response to the pandemic for continuity of learning is built on the government’s pre-pandemic recognition of this and the acceleration that the pandemic has now lent to their ICT policies and initiative. This is discussed in more detail in Chapter 3.

Dimension 2: Safe operations

The MEXT Strategy provides guidance on how to manage school environments when reopening during the pandemic:

“Recover learning at school by setting special attendance days, making staggered attendance schedules, redesigning the timetable, reviewing the length of long vacations, using Saturdays for school, prioritizing school events and shortening their preparation time, etc.” In addition, the leaflet states that: “To provide schools across the country with the necessary human and material resources for ensuring effective learning, MEXT has assigned large numbers of additional teachers, school support staff, and more. MEXT is also providing all elementary, junior high, and high schools nationwide with funding to support reopening in order to take quick, flexible countermeasures against COVID-19, and ensure quality learning.”

This has included the introduction of new measures such as:

- Relaxing qualification criteria for recruitment of teaching staff, to enable short-term recruitment of retired teachers, university student teachers and community personnel – to increase the human resources available to schools to cope with the additional burden that the pandemic brings; and
Assigning nurses to schools, and covering expenses for equipment related to the burden of the COVID-19 pandemic e.g., “Disinfectants, non-contact thermometers, ventilation equipment, heat stroke prevention for lunch cooks, learning materials, equipment to utilize empty classrooms, more telephones, school cell-phones, etc.”

MEXT has also provided a number of publicly available sources to support its education sector with guidance on safety precautions during the pandemic, including:

- Special MEXT website covering the COVID-19 crisis
- Infection control manuals and guidelines for schools
- Children Learning Support website
- COVID-19 cases at elementary and junior and senior high schools and the countermeasures based on the data
- Measures against COVID-19 in schools in Japan

**Dimension 3: Health, well-being and protection**

Gleaning from the data of OECD’s 2020 Country Report on ‘Education During COVID-19: Were Teachers and Students Ready?’ the results below (Table 2) highlight low student resilience to shocks in the education system, and ultimately show that Japanese students were less prepared than in other OECD countries. This has ramifications for how schools and teachers must support students during school reopening. Though the MEXT policies are somewhat ‘light’ on measures for supporting students with psychosocial stress and trauma, it has redressed some of the potential ‘softer’ support requirements by budgeting for activities such as: creating opportunities for nature-experience and sports activities, as well as enhancement of opportunities to experience cultural arts activities; and additional placement of lecturers and tutors to support students’ supplementary learning in order to complete unfinished parts of the curriculum at the end of the school year. This is particularly in response to concerns over the mental health of Japan’s students, considering that child suicide rates in Japan are higher than they have ever been, especially among girls.

| TABLE 2 | STUDENTS’ ATTITUDES TOWARDS SELF-DIRECTED LEARNING PRIOR TO THE CRISIS |
|----------------|---------|------------------|
| OECD AVERAGE  | JAPAN AVERAGE | COMMENT |
| Students who ‘agree’ or ‘strongly agree’ that their belief in themselves gets them through hard times (PISA, 2018) | 71% | 56% | This metric helps decision-makers to look at whether students have resilience to shocks, such as COVID-19. Japan’s students are below the average for OECD countries in feeling ready for such an overturn of their usual schooling routines |

MEXT has approached children’s well-being by:

- Managing their health through the assignment of nurses at schools and funding of expenses related to additional COVID-19 protection and avoidance (such as face masks, disinfectants, etc);
- Supporting their well-being through the promotion of Education for Sustainable Development (ESD), which aims to develop students’ values and behaviour, helping them to solve issues autonomously;
- Funding of additional teachers and support staff to enable schools to cope with the additional demands and needs generated by the pandemic for children; and
- Allocating specific additional funding for needs arising among more vulnerable student populations, such as waiving tuitions and other fees for students whose household finances changed significantly due to the impact of COVID-19, and funding efforts for minimizing infection risks on school buses for special needs education schools.

Since deeper attention will need to go to children at risk of poverty, and families whose incomes may be negatively impacted by the pandemic, there is recognition within the MEXT leaflet of these issues and concrete efforts/funding to combat them. Nonetheless, the leaflet does not specifically tackle aspects of mental health and psychosocial support (MHPSS), which may be the result of limits of this study in deepening an understanding of how MEXT is handling this important issue. But it is surprising that a COVID-19 response would not specifically address such a key area of global concern in pandemic response.
Dimension 4: Finances

Household finances

Although the percentage of out-of-school children in Japan is very low, at 1.2 per cent (2019)\textsuperscript{29}, while the primary completion rate is over 99 per cent, there are nonetheless a proportion of children that may be disadvantaged. In January 2017, The Guardian-UK\textsuperscript{30} reported that 3.5 million children in Japan – one in six of those aged up to 17 – were in households classified as experiencing ‘relative poverty’. The OECD define relative poverty as having income of less than one-half the national median disposable income, which for a household of one parent and one child means a monthly income (including public assistance) of 140,000 yen ($1,288) or less. Children raised in these households are potentially more disadvantaged in terms of medical care, meals, schooling, and prospects for higher education, and there is a trend of these kids being unable to escape from poverty in the future.

Of the 3.5 million children who are eligible for state support, only 200,000 actually receive any – a low take-up rate that campaigners blame on the stigma attached to living on social security. Vulnerable children, although probably accessing formal schooling given high rates of enrolment and retention in Japan, may therefore suffer impacts on their capacity to do well at school and leave poverty in later life. However, during interviews, MEXT predicted no such effect on students, when isolated to the impact of the pandemic, as they point to Japan’s Family Income and Expenditure Survey that showed an increase in household income compared to 2019. This may be optimistic given differential impacts that the pandemic can have on particular sectors, as well as the ongoing impacts of the pandemic both globally and in Japan in terms of the economy.

Education financing

As highlighted above, the expenditure per child on education in Japan is high in gross terms – it is higher than the OECD average and much higher than the average within the region. There is not an overall concern about the financial support to the sector. That said, the proportion of GDP public expenditure on education is comparatively low as compared to the OECD average, which signals below-average prioritization of education in the budget.\textsuperscript{31, 32} When coupled with the IMF’s warnings around projected declines in overall productivity and growth (due to a shrinking and aging population pre-pandemic, and potentially exacerbated or worsened now by the pandemic)\textsuperscript{33}, there are signals of potential medium-to-long-term concerns for the education sector. Worries that could be affected by the pandemic insofar as this leads to economic declines that are being predicted worldwide, which will only enhance the burden on Japan’s working adults to prop up increased public spending and support to sectors experiencing high job losses. This will compound the income inequality that was already on the increase in Japan before the pandemic. Furthermore, it remains to be seen how these trends will affect the Japanese Government’s existing emphasis on automation and artificial intelligence technology as the means for offsetting its declining population and labour force. The government’s 2014 ‘Japan Revitalization Strategy’, envisaged a ‘New Industrial Revolution Driven by Robots’ and the ‘Society 5.0’ initiative in 2019 aimed to better utilize and disseminate robots across Japan\textsuperscript{34}.

However, despite some potentially concerning trends and projections, MEXT’s Leave No One Behind approach points to some positive financial reaction to the pandemic. A clear (high-level) budget has been outlined in the leaflet, which is not always possible to find publicly and so rapidly in the case of other countries. The full budget can be found in the Strategy document\textsuperscript{35}, but some highlights include:

- Total for the First Supplementary Budget: 276.3 billion yen (approximately $2.54 billion):
  » Support for students whose household finances dramatically changed: 700 million yen (approximately $6.44 million; and
  » Ensuring learning through the acceleration of GIGA: 229.2 billion yen (approximately $2.1 billion).

- Total for the Second Supplementary Budget: 161.7 billion yen ($1.48 billion):
  » Securing necessary personnel to ensure learning: 31.8 billion yen (approximately $294 million).

The realization of these allocations and their impact is not possible to ascertain for the purposes of this study, but will be an important measure of whether a rapid-reaction approach such as this can be successful, and a model for other countries. Further information on the specific allocation for GIGA is provided in Chapter 3.
2.3 Main challenges faced by the education sector

As highlighted throughout the analysis of the dimensions above, the following challenges are faced by Japan’s education sector:

- In 2017 there were 3.5 million children living in households in ‘relative poverty’, which is consistently linked with consequences on a child’s capacity to learn to their full potential, due to the disadvantages they face across a multitude of domains;
- Japan ranks very poorly among other OECD countries in terms of wealth inequality, meaning that there is still a large gap between the ‘have’s’ and ‘have-nots’, which in turn creates bottlenecks in terms of how children are able to progress through education and into the job market;
- Japan has an ageing population, which is placing immense pressure on the working-age population, and in turn leading the government to strategies involving artificial intelligence and robotics, which will put pressure on education and skills training systems to respond;
- The OECD reported in 2018 on a range of factors related to Japan’s ICT capacity, mainly focusing on ‘readiness’ of teachers to deliver learning in a blended and more individualized manner. This highlighted the below-OECD-average confidence and skills of Japan’s teachers in terms of ‘digital readiness’; There are some infrastructural weaknesses for digital connectivity, namely in terms of lack of data on the devices and access that children have at home (when schools close as well, as for future individualized blended learning approaches), as well as the numbers of devices per child at schools (which are off-track on Japan’s own goals for one child to one device);
- The OECD’s survey (2018) highlighted below-average rates of ‘self-belief’ among students, as compared to the OECD average. This highlights the low resilience of Japan’s students to shocks such as the pandemic; and
- Although there may be negative impacts to Japan’s economy, if global predictions prove accurate, MEXT, in response to interviews during this study, is optimistic that pre-pandemic growth will continue and that effects of this are not yet being felt.

The MEXT Leave No One Behind approach also highlights the following additional challenges that are under close watch:

- Ensuring children can ‘catch up’ on learning through supplementary instruction and materials on their return to school or, if not possible, to remediate this through ‘special measures’ such as moving content to following years;
- Working to mitigate the impact on those in milestone years taking important examinations to enter high school and university in particular;
- Addressing the issue of additional costs for families when children are learning from home, with targeting of low-income households for top-up payments towards communications costs, and waiving tuition fees when returning to school.
03

Thematic deep dive: The GIGA school project in Japan
In Chapter 2, there is a broad overview of Japan’s education landscape and the challenges facing it, either exacerbated, accelerated or caused by the pandemic. In this chapter, deeper focus is given to one particular challenge that MEXT believes to be high priority: the ICT capabilities of Japan’s education system and GIGA that MEXT has decided to prioritize and accelerate as a result of the COVID-19 pandemic. Many of the challenges outlined above feed into this specific area focus, as will be elaborated below.

3.1 Japan’s digital readiness: Pre-COVID-19 ICT capacity

Japan’s ICT-in-education capacity, as has already been highlighted and will be discussed below, is deemed below-average compared to other OECD countries.

Why should this be an issue for a country that does so well across ‘normal’ education indicators?

The immediate response to this question is that, like other countries globally, Japan has faced an academic year like no other. Children’s ‘access’ to learning has changed according to the infrastructure and support that they could expect in their home environment, and the ongoing support of the school system once they returned to school. This means that the parameters have changed, and digital readiness has become an essential tool for response to COVID-19.

UNICEF’s 2017 ‘State of the World’s Children’ report highlighted that 71 per cent of the world’s youth (ages 15 to 24) are online. However, a recent joint report (2020) by UNICEF and the ITU instead indicates 1.3 billion children aged three to 17 do not have an internet connection in their home, and 63 per cent of 15 to 24-year-olds are disconnected. In Japan, 39 per cent of students reported no computer at home to use for schoolwork (2018) (see Table 3).

This means that there are huge proportions of children globally, as well as in Japan specifically, who are not online (for schooling) and who face a clear disadvantage in terms of lack-of-access to the benefits that this medium provides. The divide between digital have’s and have-not’s:

"Mirrors prevailing economic gaps, amplifying the advantages of children from wealthier backgrounds and failing to deliver opportunities to the poorest and most disadvantaged children."

A lack of access to the internet or ICT devices and literacy to benefit from connectivity:

"Means exclusion, marked by the lack of access to the wealth of information available online, fewer resources to learn and to grow, and limited opportunities for the most vulnerable children and youth to fulfil their potential."

However, the UNICEF report also highlights that the acceleration of ICT in education “needs to be backed by training for teachers and strong pedagogy.” Therefore, for many countries, including Japan, the pandemic put the spotlight on:

- Weaknesses in the ability of the sector to respond with learning during school closures using ICT;
- Poor capacity and confidence among teaching forces to deliver education using ICT, through blended learning approaches; and
- Complex reasons for low ‘take up’ by students of available education content, including among many other factors the potential lack of ‘infrastructure/ connectivity’, as well as their own low confidence and capacity to handle digital platforms for learning in an individualized manner.
In the case of Japan, this weak capacity has several ramifications, as follows:

- Given the reliance, during the pandemic, on remote and distance learning, especially using digital platforms for sharing content and supporting/monitoring student learning, the ‘baseline’ position of Japan prior to the pandemic is a concern – to some extent in terms of connectivity/infrastructure, but mainly in terms of ‘digital readiness’ of teachers and pupils to adopt blended learning;

- Japan’s ‘prior’ push for enhancing ICT capacity. These efforts included maintaining their high PISA scores and in so doing also maintaining the inferred feedback loop between PISA scores and educational and assessment quality. As reported by MEXT, responding to this study’s questionnaire, the average score and ranking for Japanese students for OECD’s PISA 2018 survey were lower than for the previous survey. Responses to the questionnaire suggested that this had been caused mainly by the fact that the survey that year was computer-based, and that and Japanese students were still “unaccustomed to operating computers and reading long passages on terminal screens”.

- In addition to the performance criteria driving MEXT, the high-level strategy for future-proofing the country’s workforce through a move into robotics and artificial intelligence, requiring that the next generation of workers has the skills to support such developments.

Japan’s digital readiness: readiness to adopt remote, distance and blended learning approaches

The OECD’s 2020 Country Report ‘Education During COVID-19: Were Teachers and Students Ready?’ which was based on the 2018 Teaching and Learning International Survey, provides a useful picture of the pre-pandemic reality. According to this report, Japan’s teacher force falls below OECD country averages on those that reported using ICT in classrooms and being able to support student learning using digital technology, pre-pandemic. The survey also highlighted Japan as being at the bottom among OECD member countries for such questions as the ‘use of computers for joint work with other students’. Table 3 summarizes the data shared in the OECD’s 2020 Country Report, and highlights the below-average ‘readiness’ of Japan’s education system to deliver remote learning to students while schools were closed.

In addition to these ‘ICT readiness’ indicators, MEXT reported that there are discrepancies among local governments in the preparation of school ICT environments. The best ratio of students to school computers is 1.8, but at the lower end it is 6.6 students – the overall average being at approximately 4.9 students to one device. Given that the aim of the Government of Japan is to ensure one computer per student at school, the targets are not being reached.

### TABLE 3 | DIGITAL READINESS OF TEACHERS AND STUDENTS PRIOR TO THE COVID-19 PANDEMIC (OECD, 2020)

<table>
<thead>
<tr>
<th>INDICATOR</th>
<th>OECD AVERAGE</th>
<th>JAPAN AVERAGE</th>
<th>COMMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers who report ‘frequently’ or ‘always’ letting students use ICT for projects or class work (TALIS, 2018)</td>
<td>53%</td>
<td>18%</td>
<td>Indicates overall need for improvement across countries in the capacity of teachers to utilize ICT when it is helpful; but also very below-average scores in Japan particularly.</td>
</tr>
<tr>
<td>Teachers who feel they can support student learning through the use of digital technology ‘quite a bit’ or ‘a lot’ (TALIS, 2018)</td>
<td>67%</td>
<td>35%</td>
<td>Indicates low confidence among Japanese teachers to use ICT in their pedagogy.</td>
</tr>
<tr>
<td>Teachers reporting a high level of need for professional development in ICT skills for teaching (TALIS, 2018)</td>
<td>18%</td>
<td>39%</td>
<td>Above-average numbers of teachers in Japan recognize their own need to improve their ICT skills for teaching.</td>
</tr>
<tr>
<td>Students in schools whose principal agreed or strongly agreed that an effective online learning support platform is available (PISA, 2018)</td>
<td>54%</td>
<td>24%</td>
<td>Lower-than-average numbers of schools are ready to support teachers to enable learning through use of ICT.</td>
</tr>
<tr>
<td>Teachers who participated in online courses/seminars in the 12 months prior to the survey (TALIS, 2018)</td>
<td>36%</td>
<td>9%</td>
<td>Indicates below-average numbers of Japanese teachers participating in professional development, which in turn indicates a ‘weak environment’ for fostering new skills and competences, such as ICT.</td>
</tr>
<tr>
<td>Students who report to have a computer they can use for schoolwork (PISA, 2018)</td>
<td>89%</td>
<td>61%</td>
<td>Though numbers of students able to access a device are high, they are still below-average as compared to other OECD countries.</td>
</tr>
</tbody>
</table>
According to MEXT respondents questioned collectively for this study, a survey was conducted by MEXT of local governments across Japan to explore what instruction was provided during the temporary shutdown of schools due to COVID-19. This review found that the percentage of local governments nationwide that were providing ‘home learning through simultaneous, two-way online instruction’ was stagnant at 15 per cent (as of June 23, 2020) 40, further revealing to MEXT that the preparation of ICT environments for education was lagging behind. Furthermore, MEXT “do not possess data on how many students/children have connectivity to internet/mobile-phone internet at home41”. There is information available through PISA (see Table 3) and potentially from household surveys, but this may only cover the existence of devices in households, without factoring whether children would gain access to such devices, be supported by parents/family to use those devices, and indeed feel confident to use the device to access educational content. The aim to improve digital readiness at schools can, therefore, be hampered once children are forced out of schools by closures and rely on their home environments for uptake of education content – although MEXT have included budget in their GIGA approach for lending high-speed routers and devices to low-income households to better equip all households with the necessary connectivity.

At the time of the pandemic, MEXT reported (through the study questionnaire) on their own research42 (conducted 1 March, 2020) that found that on average:

- 4.9 pupils/students share one educational device;
- 91.4 per cent of ordinary classrooms have school-wide network (96.6 per cent have connectivity to internet);
- 56.7 per cent schools have access to digital textbooks for teachers; and
- 69.8 per cent of teachers answered that they are ‘able’, or ‘able to some extent’ to teach classes using ICT.

Which does, interestingly, present a different picture to the data gather during PISA 2018 (Table 3) that showed a much lower level of confidence among teachers. The comparability between surveys cannot be assumed, but there could be some indication that by 2020 there have been some improvements already in teachers’ digital readiness.

While some of these rates are relatively high, it is Japan’s aim for every pupil to have access to an individual education digital device, and rates of teacher ‘readiness’ to switch to a digital modality are also lower than desirable. The pandemic and consequent school closures highlighted certain gaps in Japan’s education sector response – namely both the readiness of students and teachers to adopt digital platforms for education in an ‘emergency’ mode of school closure, as well as the sector’s broader ICT capacity in the context of delivering education to achieve blended and individualized learning approaches that generate resilience for such emergencies. As the questionnaire respondents stated:

“In Japan, ICT facility at school had been inadequate and there had been huge regional disparity. Educational computers had been insufficient and communication networks such as Wi-Fi had been weak and vulnerable at school43.”

There were a lot of successes that are useful for learning across the region. Even the gap in ICT capacity has been turned toward success due to the ramp up, post-pandemic, of targeted funding for Japan’s own approach to the GIGA initiative, to improve digital access going forward.
3.2 Japan’s readiness to respond during school closure

MEXT has already collected some data on the take-up of educational content during COVID-19 by collating information about the type of learning assigned by schools (see Table 4). As the data highlights, children at different levels were catered for, but with differing levels of intensity across the types of media. Almost all students received print-based materials, but all other types of media reached only a proportion of children. Focusing on digital educational materials, only at the secondary level was this catered for well (75 per cent of schools), whereas elementary school and special needs education school students were poorly reached.

Furthermore, MEXT self-report that from their “collections of good examples on learning activities using ICT among primary, lower and upper secondary schools in Japan” (as of 26 May 2020), it was found that ICT has been utilized appropriately in educational sectors to ensure learning for children/students, even in this case of emergency.

However, perhaps also in response to media and expert criticism from neighbouring countries of Japan’s weak digital preparedness in the education system44, MEXT has been the driving force behind the intention to accelerate and scale-up GIGA in Japan. The Ministry is well aware of both the OECD evidence and recent MEXT-data from local government offices, all cited above, that indicates reasons to be concerned. Namely, that a significant proportion of teachers and students are not confident digital users, nor necessarily able to access digital devices, and that two-way, simultaneous online instruction of pupils was at a very low 15 per cent in June 2020 during school closure.

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**TABLE 4 | TYPES OF LEARNING MEDIA ASSIGNED BY SAMPLED SCHOOLS DURING THE COVID-19 PANDEMIC (MEXT, 2020)**

<table>
<thead>
<tr>
<th>TYPE OF LEARNING MEDIA</th>
<th>INDICATOR</th>
<th>ELEMENTARY SCHOOL</th>
<th>LOWER SECONDARY SCHOOL</th>
<th>COMPULSORY EDUCATION SCHOOL</th>
<th>UPPER SECONDARY EDUCATION</th>
<th>SECONDARY SCHOOL</th>
<th>SCHOOLS FOR SPECIAL NEEDS EDUCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textbooks or paper educational materials</td>
<td>Number of schools</td>
<td>1,715</td>
<td>1,742</td>
<td>87</td>
<td>153</td>
<td>20</td>
<td>105</td>
</tr>
<tr>
<td></td>
<td>Ratio</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>99%</td>
<td>100%</td>
<td>95%</td>
</tr>
<tr>
<td>TV programmes</td>
<td>Number of schools</td>
<td>608</td>
<td>586</td>
<td>41</td>
<td>48</td>
<td>10</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>Ratio</td>
<td>35%</td>
<td>34%</td>
<td>47%</td>
<td>31%</td>
<td>50%</td>
<td>35%</td>
</tr>
<tr>
<td>Educational videos created by the Board of Education</td>
<td>Number of schools</td>
<td>385</td>
<td>407</td>
<td>34</td>
<td>46</td>
<td>10</td>
<td>47</td>
</tr>
<tr>
<td></td>
<td>Ratio</td>
<td>22%</td>
<td>23%</td>
<td>39%</td>
<td>30%</td>
<td>50%</td>
<td>43%</td>
</tr>
<tr>
<td>Digital educational materials except above-mentioned contents</td>
<td>Number of schools</td>
<td>591</td>
<td>627</td>
<td>46</td>
<td>79</td>
<td>15</td>
<td>47</td>
</tr>
<tr>
<td></td>
<td>Ratio</td>
<td>34%</td>
<td>36%</td>
<td>53%</td>
<td>51%</td>
<td>75%</td>
<td>43%</td>
</tr>
<tr>
<td>Interactive online coaching</td>
<td>Number of schools</td>
<td>138</td>
<td>173</td>
<td>15</td>
<td>72</td>
<td>14</td>
<td>44</td>
</tr>
<tr>
<td></td>
<td>Ratio</td>
<td>8%</td>
<td>10%</td>
<td>17%</td>
<td>47%</td>
<td>70%</td>
<td>40%</td>
</tr>
<tr>
<td>Physical exercises which can be taken at home safely</td>
<td>Number of schools</td>
<td>1,076</td>
<td>1,047</td>
<td>58</td>
<td>84</td>
<td>15</td>
<td>78</td>
</tr>
<tr>
<td></td>
<td>Ratio</td>
<td>63%</td>
<td>60%</td>
<td>67%</td>
<td>55%</td>
<td>75%</td>
<td>71%</td>
</tr>
<tr>
<td>Others</td>
<td>Number of schools</td>
<td>30</td>
<td>22</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Ratio</td>
<td>2%</td>
<td>1%</td>
<td>2%</td>
<td>1%</td>
<td>0%</td>
<td>10%</td>
</tr>
</tbody>
</table>
3.3 Japan’s engagement in the GIGA school project and the linkage with the global GIGA initiative

In MEXT’s own statement:

“We aim to realize an educational ICT environment optimized for each of the various children, including those who need special care, leaving no one behind, and to ensure further development of their abilities through the best mix of Japan’s long-standing accumulation of past educational practices and cutting-edge ICT technology. Through these measures, MEXT also tries to reduce teachers’ burden for preparing classes and students’ assessments, and lead to work-style reform at schools by promotion of adopting ICT system such as integrated support system for school affairs, as well as the realization of ‘1 computer per one student.’”

The Government of Japan has allocated increased funding streams to this end. One of the major targets for investment is GIGA. See Figure 3 for an illustration of how MEXT links improvements in ICT with improved learning.

In terms of how Japan’s GIGA project relates to the global GIGA programme (see Box 1), there is a clear linkage but no formalized arrangement. The global GIGA initiative focuses mainly on low and middle-income countries – having commenced in Asia so far in Afghanistan, Pakistan, Bhutan, Fiji, Mongolia, Papua New Guinea and Vanuatu – and how it works with national governments to map connectivity within schools before devising a plan for improving connection and digital readiness. In contrast, Japan’s GIGA is tailored to its own aims for all students to have access to their own device, which has led to a push for school connectivity, as well as device distribution. In the fiscal 2019 supplementary budget compiled in January, 231.8 billion yen ($2.13 billion) was allocated for the provision of one ICT device per one student, and the integrated preparation of high-speed, high-capacity ICT networks in schools. Subsequent to that, in response to the expansion of school closures due to COVID-19, the first supplementary budget for the 2020 fiscal year allocated a further 229.2 billion yen ($2.1 billion).
The ministry indicate that their emphasis on implementing GIGA includes the aim of providing an educational ICT environment:

“For all children, including those who are in special needs, namely, disabled children/students and children/students in low-income households. For instance, MEXT provides assistive computers which support input/output for children with visual, auditory, and physical disabilities. In addition, MEXT supports rental of high-speed communications equipment (mobile routers) by local governments to households that do not have Wi-Fi facilities. Moreover, to support children/students in low-income households, special additional payments have been made to help cover communication costs using existing subsidy programmes, so that they can continue studying at home.”

Therefore, in the digital world in which we live, guaranteeing connectivity and access to technology is essential to ensure that divides between advantaged and disadvantaged children do not widen. This is something recognized by MEXT as being imperative for equity purposes:

“Especially for children living in remote locations, or those held back by poverty, exclusion and emergencies that force them to flee their homes, digital technology and innovation can open a door to a better future, offering greater access to learning, communities of interest, markets and services, and other benefits that can help them fulfil their potential, in turn breaking cycles of disadvantage.”

In August 2020, MEXT conducted a survey on the ‘Situation (as of the end of August) regarding procurement for the realization of the GIGA School project.’ The survey revealed that almost all local governments are expected to take delivery of the necessary computer terminals by the end of the fiscal year. Furthermore, MEXT is working to provide information that will be of use to schools by issuing ‘Reference materials for the effective utilization of ICT’ and compiling good examples and practices for developing effective lesson plans using ICT. However, ‘digital readiness’ in terms of capacity to use ICT for content transmission and take-up is crucial and not yet receiving enough attention in Japan. The global GIGA team recognize, as elaborated during this study’s interview with representatives, that:

GIGA is a joint ITU and UNICEF initiative that was launched in 2019. It aims to provide connectivity (access) to every school in the world. GIGA will act as a convener between funding opportunities and connectivity projects for schools in disconnected areas. GIGA provides services that can support country governments to develop their case for investment through data transparency, regulatory reform, and public financing. In the same way that Gavi, the Vaccine Alliance, successfully pooled country demand when sourcing and buying vaccines to make them more affordable, GIGA aims to aggregate demand for connectivity. It operates under four pillars, namely:

» To map connectivity demand;
» To improve financing through differing models for generating market interest and engagement;
» To connect schools with safe, secure, reliable and fit-for-purpose infrastructure; and
» To empower digital learning.

As clarified by the GIGA programme team: “GIGA starts with country engagement and data collection, and closely collaborates with local UNICEF and ITU offices and colleagues to begin discussions and continue engagements with the government and relevant ministries (Education, ICT), laying the groundwork for a formal agreement on the GIGA workplan and the structure of a GIGA-specific partnership with country leadership. GIGA works with local/regional UNICEF and ITU counterparts and with the government to assess availability of data, allowing us to initiate the process with our mapping team to conduct data collection. This will either be all-new or will support existing data. For example, in Colombia, we applied artificial intelligence techniques to automatically map schools from satellite imagery, which provided the government the location of 7,000 schools that were not part of their official datasets.”

(Interview and written responses to questions raised with global GIGA Programme representatives (see Acknowledgments list) by Mott MacDonald Research Team, November 2020).

BOX 1 | THE GLOBAL GIGA INITIATIVE
1. GIGA global brings focus specifically to internet connectivity and infrastructure, to prioritize a clear vision and the crucial elements for enabling its success; and

2. Yet, this is obviously not the ‘answer’ to ensuring that schools, teachers, students and communities access useful learning content. As stated by one interviewee:

"Teachers are not that enthusiastic in embracing technology – it is not the hardware that is the issue, but the ‘soft’ aspects. This makes it very hard to reach out to remote and marginalized areas with initiatives such as GIGA. In such difficult conditions, we must be very careful in how to approach them with GIGA, to ensure it is not doomed to fail. Hence, regionally the approach is trying to find the synergies between introduction of ICT/technology and the local context, i.e., what will make it sustainable in that area. So, the Smart Village concept could provide a platform for GIGA."

3.4 Enabling equitable access to learning

There is much evidence, both historically and emerging from COVID-19, for the important role that ICT can play in education, if well implemented. This is the driving force for the global GIGA initiative, with its vision for connectivity for all for better learning. This vision can be applied in all countries of the world, particularly towards collective efforts around reimagining education systems with better resilience and more flexible bespoke learning. Therefore, ICT must be understood as just one tool within a wider framework for how learning is delivered. There are two types of uses of ICT for learning:

1. Distance learning, which needs to combine ICT delivery with consideration of the many other factors affecting students’ access to learning away from school; and

2. Blended learning which can be classroom based, and relies on the teacher integrating ICT into his/her teaching. Where both students and teachers build confidence in the use of ICT, and the education system is ready to respond with online content, it is possible to envisage a move towards individualized learning, and overall a much greater resilience to shocks in the system.

Therefore, as will be recognized in the recommendations section below, it is not enough to provide hardware and connectivity to students. Countries such as Japan must go beyond GIGA, or similar types of initiatives to promote connectivity and devices, with a more transformative vision to achieve equitable quality learning for all. This is at least partially recognized by MEXT’s approach of ‘digital readiness’, which emphasizes both the increase to device and connectivity access, through GIGA, as well as the need to improve confidence to use ICT among teachers and students. Recognizing that access to devices is not sufficient, the budget request for the 2021 fiscal year includes 427 million yen ($3.92 million) for creating online training programmes for teachers in how to use ICT in their lessons. As stated by respondents to this Study’s questionnaire:

"MEXT believes that it is important to nurture information literacy instruction to understand information independently, comprehend important points, collaborate with other students utilizing that information, and try to create new values in society where the future is uncertain. GIGA will ensure every student can share their thoughts and discuss interactively, which makes it possible to learn collaboratively at any time. In addition, ensuring distance learning will sustainably enable equitable and individually optimized learning in every school in Japan, never leaving each of the various student behind (e.g., enriching opportunities for study such as providing lessons from professionals, ensuring learning opportunities to get various perspectives for children in rural areas and on remote islands, and ensuring learning opportunities for children in hospitals by connecting internet between classroom and those children)."
04 Lessons learned
Detailed planning and budgeting for emergency situations, along with a strong system, facilitates rapid coordination of a response.

4.1 Lessons learned

The following major lessons have emerged from this Study: **Detailed planning and budgeting for emergency situations, along with a strong system, facilitates rapid coordination of a response.** The shocks created by COVID-19 were recognized by MEXT in a rapid and comprehensive manner. This is highlighted by policies implemented by MEXT during the pandemic, which are largely described in their “Education in Japan Beyond the Crisis of COVID-19 – Leave no one Behind” leaflet. The Leave No One Behind approach outlines the effects of the pandemic and the responses at each level (elementary, secondary and higher education) and across themes (curriculum, safety, assessment, and use of ICT). The Strategy also outlines a high-level but comprehensive budget for the realization of the activities, including specific lines for special educational needs schools and families whose income may have been impacted by the pandemic. However, monitoring of the implementation and impact of this approach have not been available for the purposes of this study, and thus ultimately overall success cannot yet be evaluated, as will be recognized by the recommendations below.

A response which pulls together existing activities and builds on what is already in place enables a smooth transition to a different form of learning. In this Study’s recent interview with MEXT, it was clarified that although the Leave No One Behind approach was not a consultative and coordinated exercise, but rather a collation by one team of the various activities ongoing throughout the ministry; nonetheless, the existing mechanisms of planning and organization within the ministry have worked to create a comprehensive and collaborative response (on paper). Furthermore, as MEXT has confirmed, the budget allocation for GIGA, as one example, has been realized and additional budget has been allocated for 2021. Again, the impacts of the responses implemented during the immediate aftermath of the pandemic are not yet evaluated, or have not been shared for the purposes of this study at least, so for now it is only the process, the plan, and the allocation of budget that can be lauded as positive steps.

The COVID-19 pandemic has served to confirm MEXT’s approach, albeit also to highlight where there are still gaps. Japan’s success lies in a very clear trajectory between identifying a problem and planning and resourcing for tackling it. In this case, MEXT saw digital literacy of teachers and students as an issue before the pandemic, as a result of its PISA results in 2018, and put in place specific policies and strategies to redress the digital literacy and infrastructure access of their teachers.

4.2 Recommendations

The recommendations below have emerged from within the limits of this Study – with a focus on MEXT’s strategic response to COVID-19, as well as with a spotlight on digital readiness and GIGA. Therefore, the analysis and recommendations are not representative of an exhaustive review of the successes and issues facing Japan’s education sector. Within that frame, the following recommendations are made:

Recommendation 1: Monitor the implementation and impact of the policies made during COVID-19

- Although the Leave No One Behind approach may not have emerged through a traditional consultative process, the resulting document is comprehensive and certainly a useful benchmark for the departments and ministries within Japan’s government, and other education systems. Therefore, it is important to learn more about how the implementation of its activities proceed, and, most importantly, how this is monitored to enable adjustment by MEXT according to evidence. If such a comprehensive plan can be clearly tracked, this will ensure that different themes of the response are not get forgotten.
• For example, the approach includes top-up funding to support financially challenged households by waiving tuition fees. It would be useful to track eligible households, successful take-up/demand by eligible households, actual disbursement/funding allocations and realization, and impact indicators such as number of children from those families continuing to attend school.

• Although MEXT already captures data as part of normal education system tracking, the pandemic has thrown up specific challenges and responses, which will need careful monitoring if MEXT is to be able to create an overall picture of the success of, and gaps in, their response. This includes re-assessing students (formatively) on their return to school and at key points thereafter, to understand the impact on learning trends; understanding the impact of the pandemic on children in more disadvantaged households by gaining a clearer picture of which households are affected by disadvantage, including lack of computer and internet, since this is now an essential prerequisite for distance learning; and building up a distance learning approach for the future that holistically tracks different aspects of delivery to indicate if Japan’s education system is resilient to future shocks.

• The collaborative approach adopted to develop the strategy would be useful to expand during implementation and monitoring of the various policies affecting education, during and after the pandemic.

• The strategy itself is already highlighting for MEXT where areas of data gaps may exist – for example, the fact that they do not have data on the types of digital devices that children have in their homes to access educational content, which is essential information in budgeting for the scale-up of distance learning modalities. As already recognized by the aims of GIGA, it is not sufficient for schools alone to be equipped to handle digital learning, but imperative that wider communities and students themselves can do so. MEXT recognizes this: “Through the acceleration of the integrated preparation of hardware, software, and human resources under the GIGA School Programme, which calls for the prompt provision of ‘one computer per student’ and the preparation of communications environments that connect even to students’ homes, MEXT will support the prompt realization of an environment that ensures learning for all children through using ICT.”48 (Bold emphasis by author).

However, it may now require further attention and budgeting to properly understand the gaps in home access and where support must be provided.

Recommendation 2: Ensure that resources continue to be targeted to disadvantaged children and those with special needs

MEXT should provide a separate, dedicated strategy for disadvantaged groups of children, which comprehensively breaks down how the allocations of the main strategy will be realized and implemented, and to ensure that all children and all types of disadvantage are profiled and tracked. At the moment, the approach outlined by MEXT only references children from poor households, in remote rural areas and children with special needs (disabilities), but there is no attention paid to issues of gender (a major problem according to Japan’s gender inequality index), and children from migrant families (children from such families tend to have challenges in language acquisition, combined with economic instability, cultural clashes, discrimination, violence, etc.). Such a strategy would also highlight how progress will be monitored, and which champions within MEXT will be responsible for consistently putting forward the case of these children.

The policies written in the leaflet of ‘Education in Japan Beyond the Crisis of COVID-19-Leave No One Behind’ approach allocate specific budget lines to support children with disadvantage, namely:

• Provision of financial support to lessen the financial burden on parents for cancellation fees, etc. due to cancelled or postponed school excursions;

• Support for waiving tuitions and other fees for students whose household finances changed significantly due to the impact of COVID-19; and

• Funding efforts for minimizing infection risks on school buses for special needs education schools to ensure a safe and secure school commuting environment for children with disabilities.

This highlights recognition of the specific needs of disadvantaged children, that may be exacerbated by the pandemic, but the push for a dedicated strategy, and its monitoring, is nonetheless needed.
Recommendation 3: Use a variety of tailored and targeted assessment approaches to understand the needs of various students

- Students have MHPSS needs and a system needs to be established to address well-being directly by identifying those needs, and supporting students both in and out of school. For those in school, this can be addressed in two ways – by training teachers to incorporate well-being into their classes – through building resilience, tolerance, self-confidence to learn independently, etc.; and to identify more serious mental health issues for on-wards referral;
- Enhance the focus on assessment to ensure that this is not only targeted at students taking core transition examinations, but also incorporates formative assessment for remedial approaches to “lost learning” during school closure; and
- Schools must now be supported to conduct formative assessment and to adjust their pedagogy to manage remedial approaches where needed. Positively, GIGA could form part of such support, especially if this goes beyond digital infrastructure and addresses the other aspects of a holistic learning approach.

This links to Recommendation 4.

Recommendation 4: Continue to scale-up GIGA across Japan, but ensure that this focuses holistically on all aspects of digital readiness, and not only infrastructure and user competence

MEXT’s recognition of the need to improve digital readiness within its education system was established years before the pandemic, but has been accelerated by its occurrence. Certainly, it is a useful area of focus in a mature system such as Japan’s, and will equip the country to tackle its ageing population and economic trends towards the use of robotics and artificial intelligence.

The main recommendation, therefore, is that Japan continues to accelerate its progress towards full-scale GIGA take-up, which would mean all schools are able to provide one computer per child and full internet connectivity to its students.

However, MEXT must go beyond this and manage the other elements of digital readiness that make up a holistic distance learning offer. A focus on digital literacy and developing confidence to use technology to support teaching is necessary to accompany the strides towards universal access that would enhance the ability of students and teachers to use the potential of the technology. This would include additional training and equipment for teachers to enable them to confidently incorporate ICT into their pedagogy, and more easily shift to using digital platforms from a distance if necessary. It would also include planning for future ‘shocks’ to the education system in, for e.g., the case of future pandemics, where full or partial school closures could again occur. A key aspect of being ready for such shocks is for Japan to plug the data gaps in what children are able to access and do access when not at school, and to be ready with different avenues for transmitting educational content and supporting its uptake.

4.3 Conclusion

Considering the severe impact of the COVID-19 pandemic on the region, Japan’s ability to respond has been aided by its high levels of investment in education (in gross terms), as well as the maturity of its system. However, this Study has sought to delve deeper into some of the specific challenges facing Japan as a result of the pandemic. The purpose of this Study was:

- To assess and estimate the various impacts of the COVID-19 epidemic on the education sector and stakeholders (children, adolescents, teachers, parents, education officials etc.); and
- To identify examples of promising responses and strategies in education and associated social sectors, which can be shared with other countries.

MEXT’s response to COVID-19 was swift and comprehensive. This is realized both in the online websites set up by MEXT and other ministries to provide information and education content across all grades; but also laid out in the budgeted measures outlined in the Leave No One Behind approach for the safe reopening of schools and resumption of learning. Therefore, to a large extent, the major impacts have been mitigated for in terms of additional safety measures at schools, combined with medical personnel deployed to support schools, and additional teacher capacity enabled through relaxing of qualification requirements. However, the impact of all of these measures, as well as tracking of children’s experiences of learning during school closure, is not yet
clarified in the MEXT data, and thus it is not possible to evaluate where gaps and issues may arise, nor what initiatives have worked well and should be continued. The data gap must be filled so that the collective policies of the Government of Japan can be judged for future planning, in case of other shocks. It is clear that MEXT’s Leave No One Behind approach is comprehensive and provides clarity to the sector, plus that there has been a successful release of funding very rapidly to support the approach. This means that ‘on paper’ there are conditions for success in responding to the challenges presented by the pandemic. Now there is a need for evidence to corroborate that.

In addition, it is useful to focus on MEXT’s prioritization of digital readiness within the education sector, which precedes COVID-19, but which has been starkly thrown into the spotlight as a result of it. Despite Japan’s high-income status, the pandemic highlighted the low level of readiness to shift learning online. This has given impetus to the response and to looking at education in Japan more broadly. As with another similar high-income country in the region, South Korea, the intense pressure put on students to perform well and to pass high-stake exams, has resulted in students with low levels of resilience and an inability to work independently. Clearly, there is a need for much more ramped-up efforts to increase children’s access to internet and digital devices at home, improve parent and family ability to support children with at-home learning, increase the number of computers at schools to realize the MEXT’s goal for one computer to one child, and provide additional training to teachers to improve their confidence in using ICT as a tool for their own classes. Currently, MEXT’s GIGA project still places too much emphasis on digital infrastructure, without evidence of a more holistic and deep-blended learning strategy that accounts for the many facets of learning that need to be considered for a resilient education system. Therefore, despite momentum behind GIGA, this Study concludes the need for a wider strategy around it. This is the time to shift focus to a more inclusive and well-being-focused education system and a blended learning approach that builds upon ICT as a tool, but not as an end-in-itself, so that the system works for all children in the country.
The relationship between Japan’s versus ITU-UNICEF’s GIGA initiatives is clarified in Chapter 3.


17 GIGA, ‘Engaging with Giga’.


19 Proportionally, Japan’s expenditure on education as a percentage of GDP is lower than OECD average. See: OECD, ‘Education at a Glance: Japan 2019’, www.oecd-ilibrary.org/docserver/1a143b02-en.pdf?expires=1605131349&id=id&accname=guest&checksum=A171FDAD9F0521E36BB0FC27897F2564

20 World Bank, ‘Japan Learning Poverty Brief’.


22 OECD Country Note, 2020: School Education During COVID-19: Were Teachers And Students Ready?


24 Eight weeks is a relatively short period of time, when compared to countries where schools have been closed for much longer – up to eight months.
This report reviews the impacts of and responses to COVID-19 on education in Japan, provides reflections on lessons learned so far in Japan’s COVID-19 response, and analyzes capacity gaps for recovery. It explores successful elements of the Government response, issues and challenges faced, and strategies adopted to continue students’ learning during school closure. It also looks to the future, in building back better and increasing the resilience of the education system to future shocks.