Impact of the COVID-19 Pandemic on Education and Teaching in Asia-Pacific

Future of Work in Education

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Published with technical and financial support by
the ILO Regional Office for Asia and the Pacific

Education
International
Asia-Pacific Region
EIAP

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Published by Education International Asia-Pacific Regional Office
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November 2021

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Education International represents organisations of teachers and other education employees across the globe. It is the world's largest federation of unions and associations, representing thirty million education employees in about four hundred organisations in one hundred and seventy countries and territories, across the globe. Education International unites teachers and education employees.

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Acknowledgements

We are grateful to all the survey respondents and interview participants for taking the time to share their experiences, concerns, and needs.

We gratefully acknowledge the support received from Education International Asia-Pacific and the International Labour Organization Regional Office for Asia and the Pacific.

We thank Prof. Padma M. Sarangapani for her overall guidance in the conduct of the study and feedback on the survey, analysis, and report. We thank Mr. Pong-Sul Ahn for the valuable feedback on the survey and draft report and Dr. Anusha Ramanathan for supporting the piloting of the survey.

We are grateful to the administration, accounts, and the office for international affairs of the Tata Institute of Social Sciences and Centre of Excellence in Teacher Education for their support.

Foreword

Nobody could have predicted a world in lockdown would ever come to pass, no matter our worst imaginings of a global emergency. And yet, in the past two years, we have witnessed coronavirus outbreaks surge, variants mutate, and economies reel from the pandemic's aftershocks. With such disruptions came abrupt school closures that threatened to leave millions of learners farther behind. Even so, we have seen teachers across the globe brave the front lines to still deliver as much quality education as possible under the most challenging circumstances yet in recent history.

Their hard work and conviction merit praise, but their struggle during the pandemic is, by no means, a cause for celebration. Teachers and education support personnel have had to abruptly shift to remote instruction en masse – an experience that has only magnified the long-standing inequalities and inequities in our education systems.

Education International Asia-Pacific sought to unpack how the pandemic has compounded these challenges and further affected the terms and conditions, professional development, and wellbeing of educators in the region.

The current landscape, as our findings point out, leaves much to be desired. While Asia-Pacific educators persevered in their work during

the pandemic, several glaring limitations, such as low access to digital technologies and limited professional training on their use, caught them unawares. With little to zero institutional support, many teachers had to figure out how to navigate a new virtual teaching-learning setup on their own while coping with increased workload and anxieties about job security.

This study, aptly subtitled "Future of Work in Education", indeed surveys the opportunities and constraints that will inevitably shape the sector's path towards a holistic, comprehensive, and inclusive recovery post-pandemic. Sharing this vision with EIAP, the International Labour Organization (ILO) Regional Office for Asia and the Pacific provided technical and financial support to make the publication of this study possible. We also gratefully acknowledge the invaluable expertise and diligence of the authors and our colleagues, whose insights and comments on the draft publication helped sharpen its analysis.

Last, but not least, we extend our sincere appreciation to the hundreds of teachers and union staff who participated in the survey and shared their stories, opinions, and ideas for ways forward in the post-pandemic world of work. Their voice matters and deserves to resonate more loudly as we reinvigorate the status of our profession, reaffirm our commitments, and rebuild from this crisis.

Anand Singh
Chief Regional Coordinator
Education International Asia-Pacific

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SUMMARY

Impact of the COVID-19 Pandemic on Education and Teaching in Asia-Pacific: Future of Work in Education

The education sector was severely impacted as schools across the globe closed down their academic activities and teaching-learning shifted to an online or remote mode. Teachers were under pressure to adapt to the digital and online technologies to engage with students in this new learning environment. This study investigates the first-hand experiences of the workforce in the education sector in the Asia-Pacific region who have been at the frontline during the pandemic. Primary data were collected between 15 July and 6 August 2021 from educators through member organisations of Education International through quantitative survey and qualitative interviews. The findings are based on 1,862 responses to the online survey from 22 countries and qualitative interviews with 16 participants from 9 countries across the region.

A majority of the survey respondents were employed in government institutions and in regular, full-time positions. Despite this, there was a decline in regular full-time employment during the pandemic and change in the terms and conditions of their employment for 16%. For nearly half the respondents, work had shifted entirely to an online mode, and for 70% it was a combination of online and remote modes. Nearly a fourth of all respondents reported increased workload; nearly

half of them were stressed about the future of their career. Even as the workforce tried to cope with the drastic shift in their mode of work, there was some form of reduction in their compensation for 21.8% of them.

Intensification of work was a major characteristic of work, as indicated by an increase in hours of work to over 10 hours per day for over 25% of the respondents. Large gaps were evident in access to digital devices, ubiquitous for work during the pandemic. Only about 43% of all respondents had laptops or personal computers they could use for their work, while most others relied on smartphones to conduct their work. Subregional disparity in access was starkly evident, with a mere 12.9% of teachers in South Asia having access to personal computers or laptops. Provisioning of devices for work by institutions was also at a low 27.4% in South Asia, while at a high of 69.3% and 58.3% in North Asia and Pacific.

Gaps in digital skills were also quite evident, with a majority of survey respondents ranking themselves as novices or advanced beginners. Just 55% of the respondents had availed of professional development, while for many learning to use digital devices happened through informal channels and peer support and individual efforts. Meanwhile, 88.4% of respondents in the study believed that the use of digital technologies, which was widespread during the pandemic, will continue into the future, but a mere 25.4% felt 'well-prepared' for the future of work. Lower levels of competence corresponded with fears about being unprepared for future work. Higher percentages of those who ranked themselves at the novice level with regard to specific digital technologies felt 'not prepared' or 'somewhat prepared' for future changes of work.

These findings have specific implications for policy and programmatic action: investment in educators by providing requisite devices, technical support, and need-based professional development; recognition and adequate compensation of teachers, who have valiantly served under great stress with little support as frontline workers; extension of support to teacher communities of practice and continuing professional development through peer groups and networks; and inclusion of teachers and their unions in social and policy dialogue as the education sector takes on the challenges of a post-pandemic world.

Impact of the COVID-19 Pandemic on Education and Teaching in Asia-Pacific

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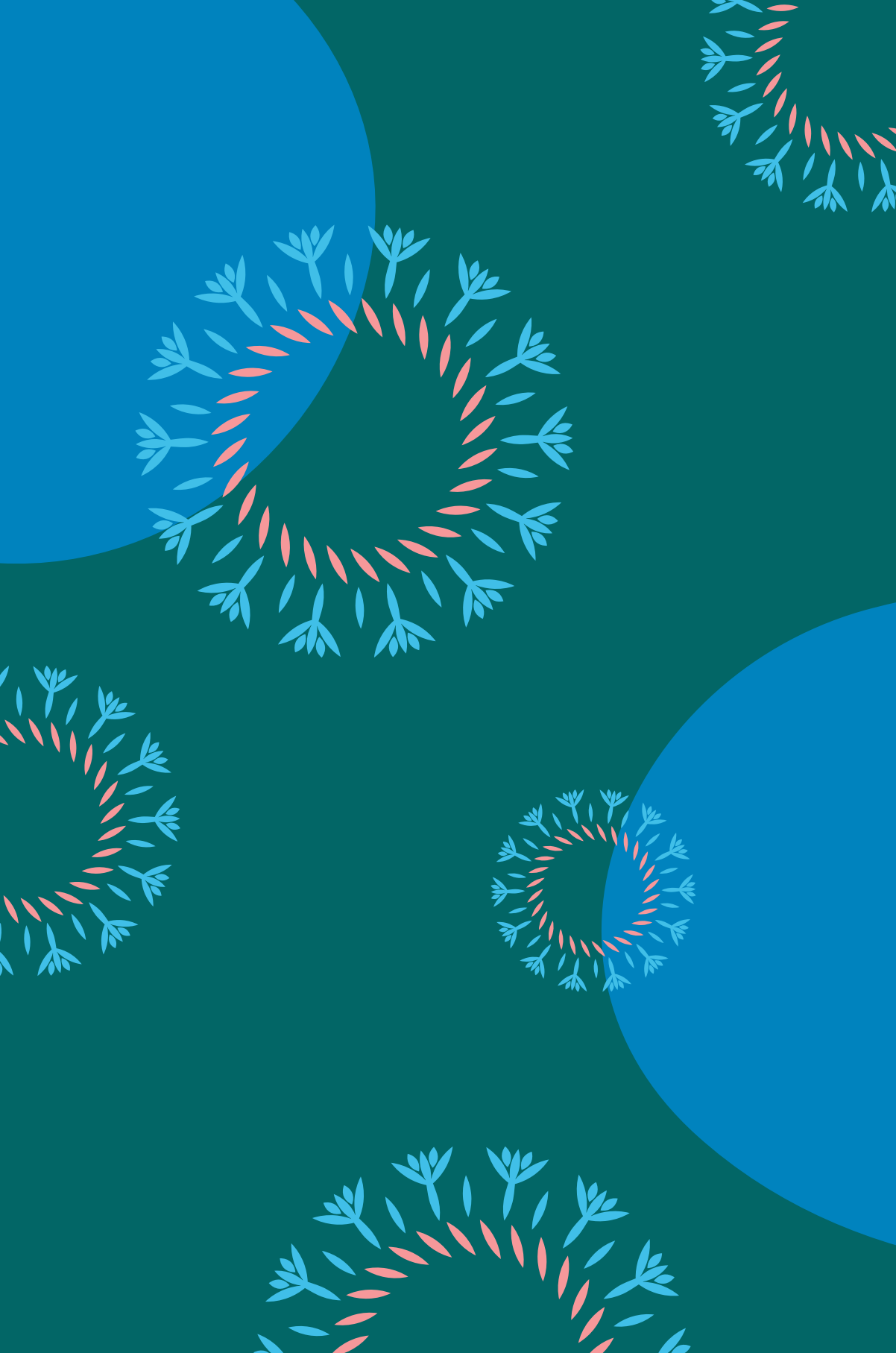


PART 1

Introduction

The ongoing coronavirus pandemic led to large-scale school closures across the globe, severely impacting student learning. Even as education systems and institutions struggle to respond to and accommodate the new norms posed by the pandemic, the workforce in the sector confronts unprecedented challenges. Rapid change in work conditions and the stress from the increasing demands to quickly respond to the new modalities of online teaching and learning and its effects are yet to be fully understood. Reports reveal early indications of job losses both in the public and private education sectors, salary cuts, increase in workload, and work-related stress. These problems inevitably impact the workforce[1], compounding issues related to differences in class, gender, and geographic location.

Educational institutions have been quick to adopt digital technology in an effort to continue their operations in an online environment. However, the initial optimism of online education has given way to fatigue and exposed the underlying inequities based on access to devices, internet, spaces, and the requisite skills for teaching and learning, etc. A survey undertaken to assess the ground preparedness for online mode of education showed that a majority of teachers did

1 Public education job losses in April are already greater than in all of the Great Recession, 2020

not feel prepared for or have the professional preparedness to manage and conduct online classes[2].

The COVID-19 crisis has profoundly affected education systems across the world. Education International's global survey of its member organisations on COVID-19 related disruptions across the five regions reported near-universal school closures, with teachers and education support personnel on the front line doing their best to maintain emergency remote educational offerings for their students. The global survey found that distance learning modalities were inequitable; teachers and staff had inadequate support to provide online education; and there was a negative impact on employment in all categories of education workers, particularly those in precarious arrangements. It found that unions were engaged in dialogue with their respective governments to protect the jobs and incomes of their education workers and that they supported members through training and information sharing.

Education institutions have adopted new digital technologies to deliver education in online and remote modalities, putting tremendous pressure on the system, staff, and students. The systemic focus is on access to these new technologies and ability of employees to adapt quickly to the new environment and engage effectively. Personnel in the education sector in general, and teachers in particular, have had to equip themselves with new knowledge and skills at a time of immense stress and little external support. Their ability to adapt to the new digital technology environment has potential impact on their employment in the sector in the future as well.

The present study, "Impact of the COVID-19 Pandemic on Education and Teaching in Asia-Pacific: Future of Work in Education", was conducted by researchers from the Tata Institute of Social Sciences, Mumbai, India, and with the technical and financial support from the International Labour Organization Regional Office for Asia and the Pacific. The study investigates the first-hand experiences of the sector's workforce through primary data from teachers and education support personnel who have been on the front line during the pandemic. The study provides a detailed overview of their experiences of teaching in online or remote modes; their working conditions; knowledge, skills, and abilities to work with digital technologies; concerns about various

2 Use of EdTech in Indian School Education during COVID-19: A Reality Check, 2020

aspects of work; and expectations and preparedness for the future of work.

The report is organised into nine sections. The rest of the introduction provides the aims and objectives of the study, research design, and profile of respondents. Sections 2 and 3 are on change in working conditions and safety and wellbeing at the time of the COVID-19 pandemic respectively; Sections 4 and 5 pertain to digital technology and skills and professional development; Section 6 is on change in the work environment due to digital and remote teaching-learning. Section 7 is on teaching and curriculum, which captures teachers' experiences of online/remote teaching, while Section 8 presents the views of teachers and union members regarding their sources of support during the pandemic. Each section provides a detailed account of findings in the subsections, with relevant insights from the interviews of teachers and union staff and a summary of the main findings from the section. The final section provides a summary of the findings, conclusions, and key recommendations for policy and programmes.

1.1 Aims and objectives

The study aimed to assess the impact of school closures and shift to online/remote mode of teaching on the employment and working conditions of education sector workers – teachers and education support personnel – in the Asia-Pacific region.

The main objectives of the study were to provide an overview of the following:

- Impact of the pandemic and school closures on employment and working conditions in the education sector
- Shift to online or remote mode of teaching and the experiences and concerns about quality of teaching and wellbeing
- Extent of technological permeation in schooling and access to digital devices and competencies in ICT
- Professional development opportunities for teachers and concerns about working conditions and future of work
- Support for teachers and education personnel with regard to online and remote mode of work in the sector

1.2 Research design

The research study was designed to collect primary data from respondents identified by the 65 member organisations affiliated with Education International across the 35 countries in the Asia-Pacific region. It involved a quantitative survey and qualitative interviews with a sample of respondents from the target population. The quantitative survey was designed and pilot-tested on 40 respondents, based on which items were revised for further clarity. To maximise outreach and the number of respondents, the final survey was administered online from 15 July to 6 August 2021 through links shared with EI member organisations in the region. The survey was sent to professional communities in the region in order to amplify the study and increase the response rates.

Table 1.1 lists down the details of the specific areas of focus of the survey questionnaire. It had 62 quantitative items, with a small number of open-ended responses. There were 17 multiple-choice items, in which respondents could choose all options that were applicable. None of the items were mandatory so that respondents could exercise their discretion to skip items they were not comfortable answering.

There was a total of 1,864 respondents from 42 member organisations[3] across 22 countries. All the 1,862[4] valid responses to the survey were analysed and are presented in this report. Out of 1,862, there were 1,574 who responded to at least one item in a section other than the demographic profile. It is important to note that despite the vast diversity within the region, the respondent profile is homogenous, with a large majority being mid-career schoolteachers employed full-time in the government sector. Consequently, subregional variations were not very evident in their responses. The findings presented here are aggregated for the entire region, except where there were noticeable subregional variations.

The qualitative component of the study comprised individual interviews with a small group of teachers and union staff to obtain in-depth information on key aspects of their experience of online and remote mode of work during the pandemic. Two separate semi-structured interview schedules were designed, one for teachers and another for

3 1,276 responded to the survey question on their union membership out of which 135 picked the option 'not a union member'.

4 Out of the 1,864 total responses received, 2 were found to be duplicates and were removed, retaining the ones with the earlier timestamp.

Table 1.1: Focus areas in the survey tool

CATEGORY	FOCUS AREAS	NUMBER OF ITEMS
Demographic Profile	Age, gender, highest educational qualification, profile of work, sector of work, years of work experience, nature of employment, type of institution, location, country, union or organisation	14
Change in Working Conditions at the time of the COVID-19 Pandemic	Change in work setup when schools closed, description of current mode of work, economic impact, working hours, perceptions on work at the time of the pandemic, concerns with regard to work in the future	12
Safety and Wellbeing at the time of the COVID-19 Pandemic	Concerns and challenges	3
Digital Technology/ ICT Access and Skills	Access to devices and digital technologies	11
Professional Development in Education Technology	Training and support available	3
Change in Work Environment due to Digital/Remote Teaching and Learning	Work in the future, concerns, challenges faced by students and their needs	8
Teaching and Curriculum	Availability of support for professional needs, resources for teaching, teaching experience with respect to online/ remote teaching and support required	11

union staff, each with 30 and 23 questions, respectively. Table 1.2 identifies the main areas explored in the interviews.

The selection of the interviewees was done with the support of their respective unions and was purposive, based on their availability for the interviews as well as access to online platforms. 16 participants (7 teachers and 9 union staff) were interviewed via an online platform

in August 2021. One of the scheduled interviews was cancelled due to lack of internet connectivity at their place of work, which could not be rescheduled. Two interviews (with participants from Japan and Sri Lanka) were mediated by an interpreter. All interviews were recorded with the consent of the participants and transcribed and coded using relevant software. Among the interviewees, there were 9 males and 7 females; 8 of them had over 20 years of work experience, 4 had between 10 and 20 years; 9 participants had a bachelor's degree or higher, including 1 PhD; 5 had professional degrees in education, and 2 had diplomas in teaching. Table 1.3 provides the breakdown of the interviewees according to subregion and the number of schoolteachers and union staff members who participated.

One important limitation of this study is the sample falling short of being representative. The survey was administered online and through organisations affiliated with EIAP, which in turn shared the survey links with their members. The online modality of data collection presupposes a certain level of access to stable internet and digital devices and availability of time. The profile of the respondents is therefore found to be homogeneous in terms of their employment in the government sector in regular, full-time positions. There was variation in response rates across different subregions, with South Asia being the most represented. India, which is the most represented in the subregion, is known for its diversity of schooling even within the government sector,

Table 1.2: Focus areas in the interview tools

CATEGORY	FOCUS AREAS
Background information	Status of school closures in the geographic region, mode of teaching, process of transition, digital technologies used
Access to resources	Access to devices and teaching-learning materials, experiences of teaching in online/ remote mode
Wellbeing and support	Concerns and stresses related to work, nature of support provided to members or received from different sources
Students and parents	Challenges and adaptations made, responses from communities
Employment and future	Changes in work, employment conditions, extension of online/remote work, requirements for professional development and support

making it difficult to draw conclusions that can be applied to the entire country. Furthermore, four countries—India, Japan, the Philippines, and Australia—make up over three-fourths of the total responses from the entire region.

The qualitative interviews were also conducted online with the help of affiliate organisations based on their outreach, the participants' willingness to be interviewed, and their internet access and facility with online platforms. All these factors make it difficult to generalise the findings of the study for the entire Asia-Pacific region. Nonetheless, the study provides rich data on wide-ranging aspects of educators' work at the time of the ongoing global crisis, from which insights can be drawn for the benefit of future policy and programme interventions.

1.3 Demographic profile of survey respondents

As shown in Table 1.4, the largest percentage of survey respondents were from South Asia (44.1%), followed by North Asia (23.4%), Southeast Asia (19.4%), and the Pacific (12.9%). The most number of responses were from India (603), followed by Japan (257), the Philippines (207), and Australia (146). These four countries account for 77% of the respondents.

Moreover, 83.7% worked in government institutions, and only 10.5% worked in private sector institutions (Figure 1.1). Similarly, a very large majority of the respondents (83.9%) were employed currently in regular, full-time positions, followed by contractual full-time positions (9.8%), and regular part-time positions (3.1%) (Figure 1.2). There was

Table 1.3: Qualitative data sample

SUBREGION	NUMBER OF SCHOOLTEACHERS	NUMBER OF UNION STAFF
South Asia	India (1), Nepal (1), Sri Lanka (1)	India (1), Nepal (1), Sri Lanka (1)
Southeast Asia	Indonesia (1)	Indonesia (1), Malaysia (1), Philippines (1)
West Asia	NA	NA
North Asia	Japan (1)	Japan (1)
Pacific	Australia (1), Fiji (1)	Australia (1), Fiji (1)

an almost equal distribution of respondents across urban and rural locations, at 43.5% and 46.9%, respectively, with 9.6% in semi- or peri-urban areas (Figure 1.3).

The largest percentage of the respondents belonged to the 36-45 age category (34.2%) followed by 46-55 (29%) and 26-35 (20.6%). There were slightly more male (52.3%) than female (46.9%) respondents, with a small percentage identifying as non-binary (0.2%) or preferring not to say (0.6%) (Figure 1.4).

The largest percentage (48.6%) had at least a bachelor's degree, while 31.6% had a master's degree, 12.6% had completed secondary education or high school, and a small percentage (2.6) had a PhD (Figure 1.5).

A large majority of the respondents were schoolteachers (76.5%), while 11.8% were heads of schools or colleges, and 2.6% were education support professionals (Table 1.5). In terms of years of experience, the respondents were mostly mid-career professionals: 50% had at least 16 years of experience, 22.8% had 6 to 10 years, followed by 17.4% with 11 to 15 years (Table 1.6). Most worked in the primary education sector (59.2%), followed by 24.3% in secondary education, and a small number in higher education (7.4%) (Table 1.7).

Table 1.4: Response rate by subregion

SUB-REGION	RESPON-DENTS	%	NO. OF COUNTRIES	FREQUENCY OF RESPONDENTS BY COUNTRY
Pacific	203	12.9	7	Australia (146), Fiji (39), Kiribati (4), New Zealand (7), Papua New Guinea (1), Samoa (1), Vanuatu (4)
South Asia	694	44.1	4	Afghanistan (1), India (603), Nepal (74), Sri Lanka (16)
North Asia	369	23.4	4	Japan (257), Korea (2), Mongolia (19), Taiwan (91)
Southeast Asia	305	19.4	5	Cambodia (1), Indonesia (8), Malaysia (88), Myanmar (1), Philippines (207)
West Asia	3	0.2	2	Bahrain (1), Iraq (2)
Total	**1574**	**100.0**	**22**	

Figure 1.1: Institutional affiliation of respondents

Legend:

- Government **1142 (83.7%)**
- Private **143 (10.5%)**
- Government aided **57 (4.2 %)**
- Other **22 (1.6 %)**

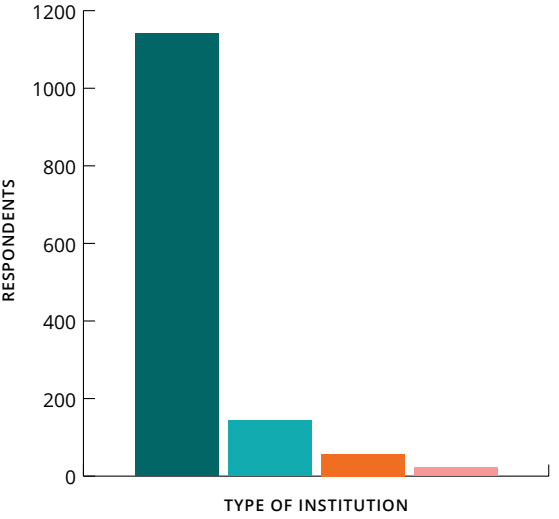


Figure 1.2: Current/latest nature of employment of respondents

Legend:

- Regular - Full time **1,288 (83.9%)**
- Regular - Part time **47 (3.1%)**
- Contractual - Full time **150 (9.8%)**
- Contractual - Part time **10 (0.7%)**
- Currently unemployed **11 (0.7%)**
- Other **29 (1.9&)**

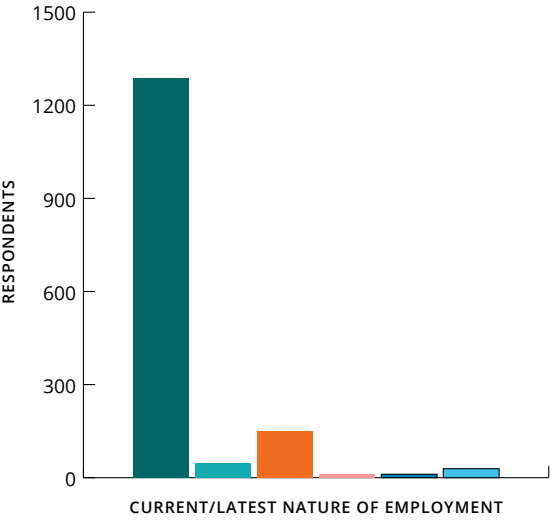


Figure 1.3: Location distribution of respondents

Legend:

- Rural **639 (46.9%)**
- Urban **592 (43.5%)**
- Peri/semi-urban **131 (9.6%)**

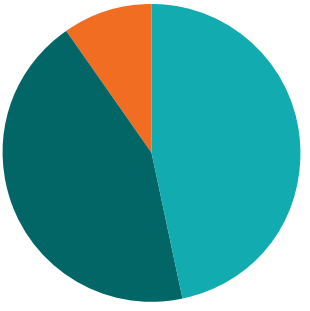
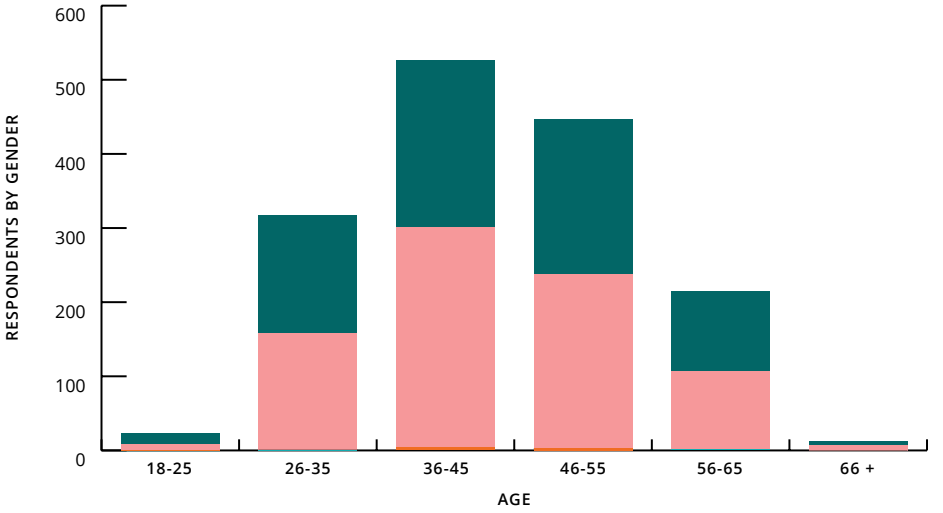


Figure 1.4: Gender and age distribution of respondents



Gender and age

- Prefer not to say **0.6%**
- Non-binary **0.2%**
- Male **52.3%**
- Female **46.9%**

18-25 (1.5%)	26-35 (20.6%)	36-45 (34.2%)	46-55 (29%)	56-65 (13.9%)	66 and above (0.8%)
1	1	4	3	1	7
7	157	1	235	1	5
15	159	296	209	104	
		226		108	

Figure 1.5: Respondents' highest educational qualification

Legend:

- Secondary/high school **194 (12.6%)**
- Technical/vocational diploma **70 (4.6%)**
- Bachelor's degree **746 (48.6 %)**
- Master's degree **485 (31.6%)**
- PhD **40 (2.6%)**

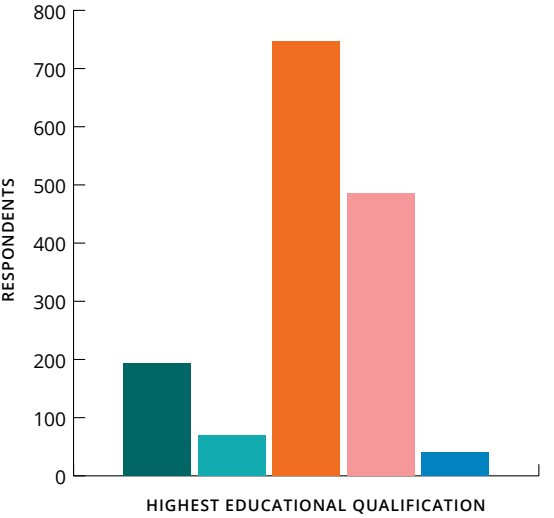


Table 1.5: Respondents' profile of work

PROFILE OF WORK	RESPONDENTS	%
Teacher in a school	1173	76.5
Faculty Teacher education	27	1.8
Faculty Other disciplines	44	2.9
Education support personnel	40	2.6
Head of a school/college/university	181	11.8
Others	68	4.4
Total	**1533**	**100.0**

Table 1.6: Respondents' years of work experience in the education sector

YEARS OF WORK EXPERIENCE IN THE EDUCATION SECTOR	RESPONDENTS	%
5 years and below	149	9.7
6–10 years	349	22.8
11–15 years	266	17.4
16 years and above	765	50.0
Total	**1529**	**100.0**

Table 1.7: Respondents by work sector*

WORK SECTOR		RESPONSES	%
Early childhood care and education		116	6.9
Primary education		1003	59.2
Secondary education		412	24.3
Technical and vocational education and training		37	2.2
Higher education	Teacher education	50	3.0
	Other disciplines	75	4.4
Total		**1693**	**100.0**

*Multiple responses allowed

Summary

The study was designed to inquire into the working conditions in the education sector in the Asia-Pacific region during the pandemic and the workers' concerns, professional needs, and preparedness for the future of work in the sector. The quantitative component of the study utilised an online survey that elicited answers from 1,862 respondents, and the qualitative component involved interviews with 16 teachers and union staff. 77% of the respondents came from four countries (India, Japan, Australia, and the Philippines). Most held regular, full-time positions in government institutions and were mid-career individuals. Over 75% were teachers of whom about 60% worked in primary education.

PART 2

Change in Working Conditions at the Time of the COVID-19 Pandemic

In this section of the study, respondents were asked to provide details of any changes they might have experienced in the terms and conditions of their work during the COVID-19 pandemic. There was a total of 12 items in this section on specific changes in the nature of their work in the context of school closures and shift to online/remote mode of teaching. The items also explored changes in compensation, mode of work, hours of work, and major concerns regarding these aspects. This section provides a detailed account of such changes in working conditions, gathered from the results of the survey along with key insights from interview participants.

2.1 School closures

Of the 1,862 respondents, a total of 1,219 responded to the question of whether there were pandemic-related school closures in their region. A majority (76.9%) reported that schools in their region or specific location were closed at the time of the survey, while the rest (23.1%) said there were no closures (Figure 2.1). As Table 2.1 shows, some respondents in Southeast Asia (44.6%) and South Asia (26.1%) reported that schools

Figure 2.1: Percentage of respondents reporting closure of schools in their region

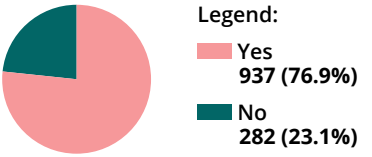


Table 2.1: Closure of schools at the time of the pandemic

SUBREGION	COUNTRY	YES	NO	TOTAL
North Asia	Japan	222	17	239
	Taiwan	61	7	68
	Others	14	1	15
Pacific	Australia	105	15	120
	Fiji	36	1	37
	Others	14	1	15
South Asia	India	286	90	376
	Nepal	35	25	60
	Others	13	3	16
Southeast Asia	Philippines	74	112	186
	Malaysia	71	5	76
	Others	5	4	9
West Asia	Iraq	1	1	2
Total		**937**	**282**	**1219**

were not closed in their respective regions. Reports of schools not being closed were high in the Philippines, India, and Nepal. This may be because school premises were used for midday meal programmes, health care, and other such community outreach programmes in these areas.

2.2 Change in terms of employment and working conditions

Even though a large majority of the respondents were regular employees, 16.1% still reported some change in their terms of employment that could be related to the pandemic (Figure 2.2). Regular, full-time employment decreased from 1,115 to 1,084 (-31 persons),

Figure 2.2: Change in terms of employment due to the pandemic

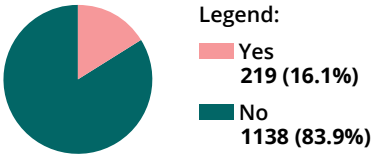


Table 2.2: Description of change in work setup when the schools closed

CHANGE IN WORK SETUP WHEN THE SCHOOLS CLOSED	RESPON-DENTS	%
My work shifted to online mode	424	49.6
My work shifted to non-online distance mode	50	5.9
My work shifted to online and non-online distance mode	178	20.8
My work shifted to small group sessions/classes/ contact with students	42	4.9
My work continued as before	118	13.8
Others	42	4.9
Total	**854**	**100.0**

while there was a small increase in numbers of regular part-time (+26), contractual full-time (+2), and unemployed categories (+3).

Table 2.2 details the change in work setup following the closure of schools. Nearly half the respondents (49.6%) said their work migrated completely to online mode during the school closures, while 20.8% shifted to a blended mode, in which some components were online and some offline. For at least 70.4% of the respondents, online and remote mode became the primary form of work engagement. 13.8% said their work continued as before with no change, and a small percentage shared that their work continued in small group sessions in contact with their students (4.9%).

At the time of the survey, about one-third of the respondents (33.3%) worked entirely from home, while about one-fifth (20.5%) reported working partly from home (Table 2.3). Notably, 23.7% reported an increase in their workload, while 13.3% reported no change in their workload.

Figure 2.3: Reduction in salary or other compensation at the time of the pandemic

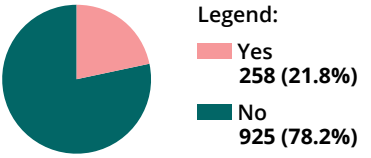


Table 2.3: Description of current mode of work*

CURRENT MODE OF WORK	RESPONSES	%
I work entirely from home	497	33.3
I work partly from home	306	20.5
My work changed from full time to part time	39	2.6
My work changed from part time to full time	15	1.0
My workload has increased	353	23.7
My workload has decreased	47	3.2
My workload has not changed	198	13.3
I am currently unemployed	7	0.5
Others	30	2.0
Total	**1492**	**100.0**

*Multiple responses allowed

ECONOMIC IMPACT

The survey explored the extent of the economic pressures that workers in the sector faced in terms of their salary, benefits, and expenses at the time of the pandemic. For about one-fifth of the respondents (21.8%) there was some form of reduction in their salary or other compensation (Figure 2.3). This is important as over 83% of the respondents were regular, full-time employees in government institutions.

Out of those who reported reduction in compensation, 18.6% reported between 25 and 50% reduction, while 68% reported less than 25% reduction in earnings (Table 2.4). For about 40% of the respondents, the reduction was in their basic salary, while for the rest the reduction was in bonuses (16.7%) or annual increment (13.3%) (Table 2.5).

It is relevant to note here that, as shown in Table 2.6, 9.5% of the total respondents (1,478) faced economic difficulty due to job losses or reduction in the income of a family member. 25.4% of the respondents

Table 2.4: Percentage of reduction in total earnings

% OF REDUCTION	RESPONDENTS	%
less than 25%	154	68.1
25-50%	42	18.6
50-75%	14	6.2
75% and above	16	7.1
Total	226	100.0

Table 2.5: Components of salary/compensation reduced due to the pandemic*

COMPONENTS REDUCED	RESPONSES	%
Basic salary	119	40.6
Housing allowance	12	4.1
Health benefits	11	3.8
Allowances (travel, stationery, etc.)	22	7.5
Bonuses	49	16.7
Annual increment/raise in salary	39	13.3
Others	41	14.0
Total	**293**	**100.0**

*Multiple responses allowed

reported an increase in expenses from preventive measures related to COVID-19, while 12.5% reported economic difficulties due to COVID-19-related medical expenses for themselves or family members. Interview participants expressed fears and concerns regarding their employment conditions. A teacher from Fiji said they were concerned about the terms of employment and potential pay cuts for teachers and other civil servants in the country. Some of the interview participants from South Asia pointed out that many fellow teachers in the region had struggled to survive during the pandemic. They recounted their struggles and demanded financial and healthcare support for all teachers. Teachers in the Philippines in particular shared that they received just a portion of a 'special hardship allowance' that they were entitled to. They were also not paid the 'hazard pay' that employees in their country were entitled to in a national emergency.

Table 2.6: Economic difficulty due to the pandemic*

ECONOMIC DIFFICULTY DUE TO THE PANDEMIC	RESPONSES	%
Loss of job/salary reduction of family member/s	140	9.5
Increased expenses related to COVID-19 preventive measures	375	25.4
Increased expenses due to COVID-19 health care (Testing/ Medications/Hospitalisation)	185	12.5
Expenses due to lockdown and travel restrictions	274	18.5
Others	44	3.0
None of the above	460	31.1
Total	**1478**	**100.0**

*Multiple responses allowed

WORKING HOURS

To get an accurate picture, the study asked respondents to recount their experience of working before the pandemic, after the outset of the pandemic, and at the time of the survey, as some countries had come out of measures such as lockdowns and school closures.

Even before the pandemic, a majority of the respondents (55.1%) worked 8-10 hours in a day, while 28.8% worked less than 8 hours. After the pandemic, this distribution shifted, with 40.5% reporting an average of under 8 hours. The decrease may be due to the reported change in the terms of employment from full-time to part-time. However, the percentage of respondents that reported working over 10 hours a day increased from 16.1% before the pandemic to 25.5% during the pandemic, and which continued to the time of the survey (25.7%) (Figure 2.4).

Of the 565 respondents who reported working 8-10 hours before the pandemic, 24.6% said their work hours had increased even more to over 10 hours. For 41%, the hours remained the same, while they went down to less than 8 hours for 34.2% (Figure 2.4a).

Table 2.7 outlines the average working hours for respondents during the pandemic. The highest proportion that reported less than 8 hours of work were from South Asia (60%), which seemed to corre-

Figure 2.4: Average number of working hours per day

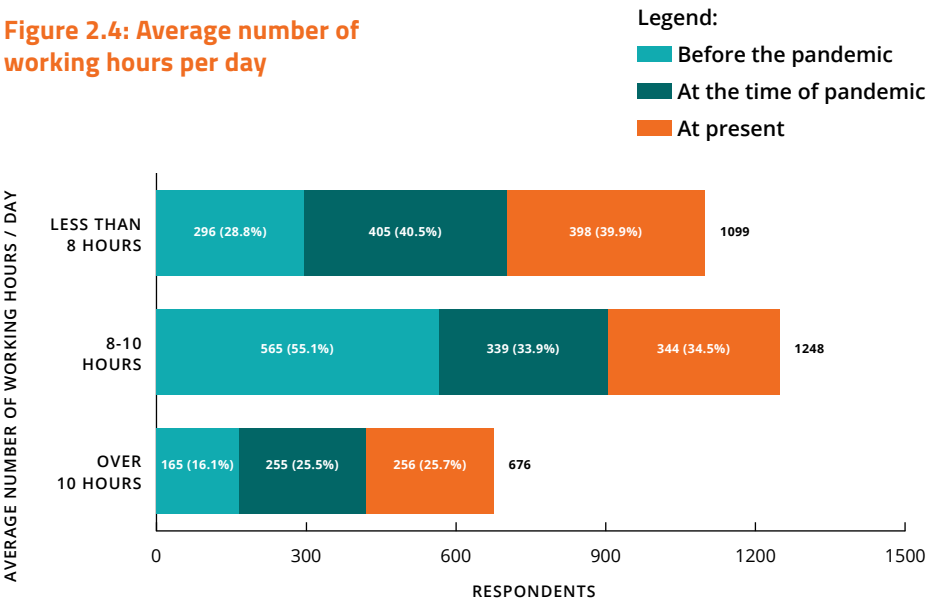
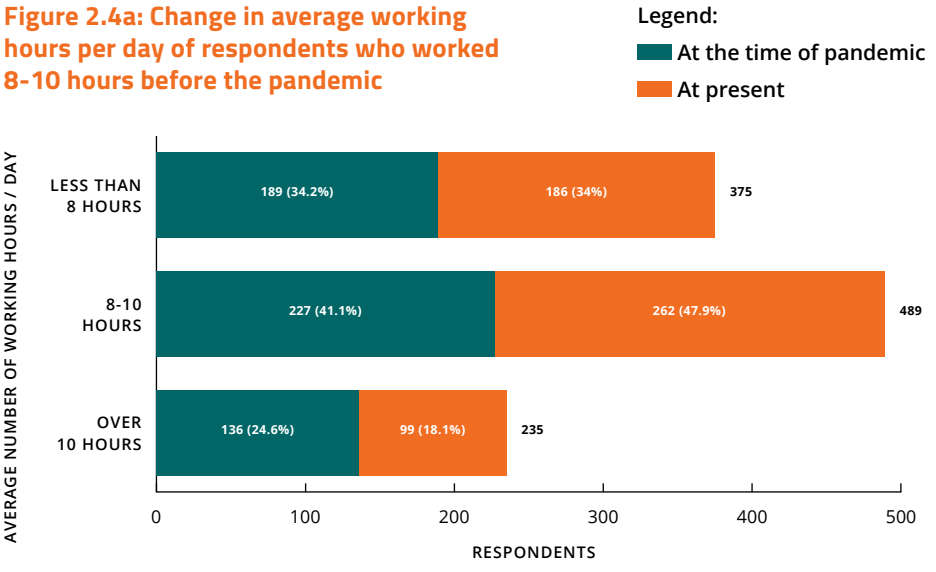


Figure 2.4a: Change in average working hours per day of respondents who worked 8-10 hours before the pandemic



spond with the lower levels of access to devices and internet in this subregion.

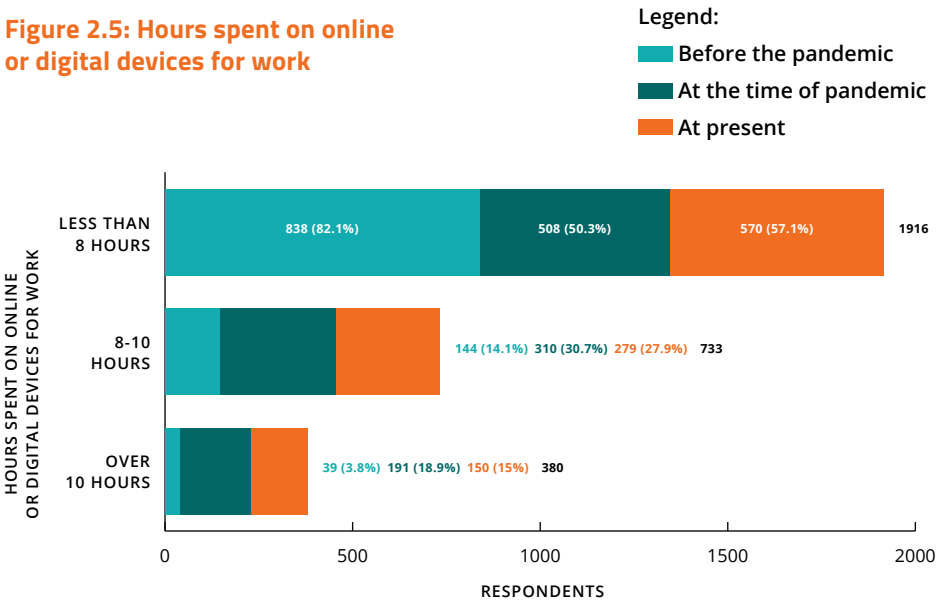
In terms of hours spent on digital devices for work, most respondents (82.1%) spent less than 8 hours on an average per day before

Table 2.7: Subregional variation of working hours at the time of the pandemic

Average Working Hours per Day at the Time of Pandemic (% of respondents)

SUBREGION	LESS THAN 8 HOURS	8-10 HOURS	OVER 10 HOURS	TOTAL
North Asia	10.9	42.2	34.9	276
Pacific	9.1	14.2	28.2	157
South Asia	60.0	17.1	6.3	317
Southeast Asia	19.8	26.5	30.6	248
West Asia	0.2	0.0	0.0	1
Total	**405**	**339**	**255**	**999**

Figure 2.5: Hours spent on online or digital devices for work



the pandemic. There was a perceptible decrease in this category, with only 50.3% spending less than 8 hours after the pandemic. Similarly, only 14% spent 8-10 hours on digital devices prior to the pandemic, which also increased to 30.7%. Lastly, only 3.8% of the respondents spent more than ten hours a day on digital devices before the pandemic, which surged to 18.9%. The trends reported at the time of

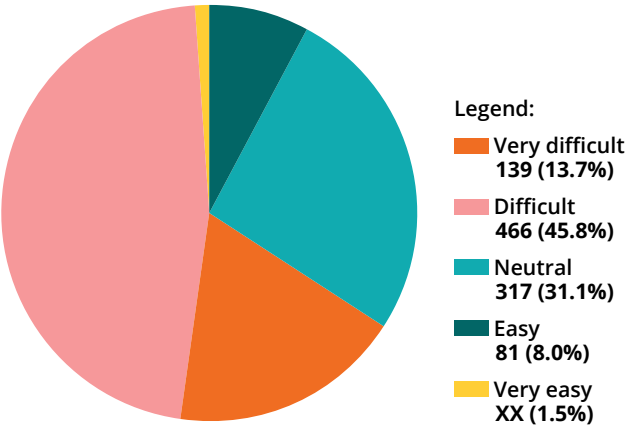
Table 2.8: Context of work at the time of the pandemic

RESPONSES	STRONGLY DISAGREE (%)	DISAGREE (%)	NEITHER AGREE NOR DISAGREE (%)	AGREE (%)	STRONGLY AGREE (%)	TOTAL RESPONSES
My work is done efficiently without distractions	6.4	30.7	20.2	32.7	10.0	**1014**
I am able to attend to my family needs better	7.4	21.1	22.7	40.3	8.5	**1011**
I am worried about losing my job	24.5	36.0	16.2	16.9	6.3	**998**
I find it difficult to manage work and home responsibilities	4.8	24.7	19.8	38.4	12.3	**1008**
I feel stressed about the future of my career	8.7	28.0	16.7	33.6	13.1	**1003**
I have the help and support of my family	1.3	7.9	11.4	57.6	21.9	**1013**
I am able to manage my work well	2.0	13.4	19.6	52.6	12.4	**1014**
The quality of my work has declined	7.4	33.6	26.8	27.2	4.9	**1011**

the pandemic continued to the present (Figure 2.5). This continued increase in working hours and use of digital devices is relevant as some countries have begun to reopen schools at the time of this survey.

Participants in the interviews expressed dismay over the 'exhausting levels of constantly being in front of the screen'. Aside from teaching, they also cited the need to be constantly on emails. They lamented the lack of opportunities to meet colleagues along the corridors after work or interact with students. They needed to prepare for teaching a lot more in advance, prepare for online assessments, and manage both online and offline modes of work. Teachers from India, the Philippines, Fiji, and Nepal unanimously reported increased administrative load

Figure 2.3: Reduction in salary or other compensation at the time of the pandemic



and lesser time for teaching. In the Philippines and Japan, for instance, hard copies of learning material were being developed, and teachers were responsible for ensuring that those copies reached students.

WORK AT THE TIME OF PANDEMIC

Table 2.8 provides an overview of the respondents' perceptions on different aspects of their work. Asked if work was being done efficiently at the time of the pandemic, 37.1% responded in the negative. However, an almost equal percentage felt that they were able to attend better to their family needs (48.8%). Moreover, 46.7% were stressed about the future of their career, while 23.2% were worried about losing their jobs. The latter figure corresponds to the number of respondents who reported being in part-time or contractual positions. 65% said they were able to manage their work well, even as 32.1% perceived a decline in their quality of work.

A summative question on perceptions of work at the time of the pandemic received mixed ratings from respondents (Figure 2.6). A majority said that the work was difficult (45.8%) or very difficult (13.7%), while 31.1% were neutral in their rating.

The respondents were asked to select the top 3 aspects of work in the future that they were most concerned about from the following: shift to remote mode of work, change in nature of work, increased duration of work, reduced compensation, increased workload, loss

Table 2.9: Respondents' main concerns with regard to work in the future

CONCERNS REGARDING WORK IN THE FUTURE	NO. OF RESPONSES				
	RANK 1	RANK 2	RANK 3	TOTAL	%
Shift in mode of work to remote work or work from home	86	89	90	**265**	10.7
Change in content and/or nature of work	89	162	138	**389**	15.7
Increased duration of work	86	128	113	**327**	13.2
Reduced compensation	64	49	40	**153**	6.2
Increased workload	163	153	90	**406**	16.3
Loss of job and/or career	54	29	50	**133**	5.4
Loss of autonomy or freedom of work	34	90	97	**221**	8.9
Lack of interactions with co-workers or students	311	143	136	**590**	23.8

of career, loss of autonomy, and lack of interaction with co-workers/students. As Table 2.9 shows, the top concern for a majority of the respondents was the 'lack of interactions with co-workers/students' (23.8%), followed by 'increased workload' (16.3%) and 'change in nature and content of work' (15.7%).

Summary

With respect to change in their working conditions, a large majority of respondents reported school closures, which forced them to shift to online and remote modes of engagement with work. Notably, in the case of two countries, India and the Philippines, respondents reported non-closure of their schools. Based on available evidence, this cannot be interpreted simply as regular teaching in these schools continuing but that schools were kept open for community outreach activities, such as midday meal programmes or COVID-related healthcare activities. The major impact on working conditions is the shift to an entirely online mode of work for nearly 50% of the respondents and a combi-

nation of online and remote mode of work for an additional 20.8%. Almost a quarter of the respondents (23.7%) reported an increase in workload at the time of the survey, another major impact of the change in the mode of work. Even if a large percentage of respondents were in secure conditions of employment, 21% experienced reduction in their compensation during the pandemic. This was at a time of increased COVID-related expenses for about 25%. The top concern for a majority (46.7%) was stress about the future of their career, while almost a quarter of them (23.2%) were worried about losing their jobs. Many felt that their quality of work had declined (32.1%). There was also an increase in the time spent at work, to over 10 hours per day for 25%, and time spent over on digital devices, to 10 hours for 18.9%. A majority (55%) spent 8-10 hours a day at work before the pandemic, and about 23% said their working hours increased to over 10 hours a day. Even so, their level of satisfaction with their own work declined, with 37.1% reporting concerns about not being effective, in addition to the lack of face-to-face interactions with co-workers and students.

PART 3

Safety and Wellbeing at the Time of the COVID-19 Pandemic

This section of the survey explored respondents' perspectives with respect to their safety and wellbeing at the time of the pandemic. The survey items included questions regarding concerns about various aspects of their physical and emotional health and wellbeing and maintenance of work-life balance.

The topmost concern at the time of the pandemic was with regard to health and safety (28.1%), closely followed by concerns about students' learning (27.5%) and emotional wellbeing (14.5%), according to the responses (Table 3.1). However, with respect to the future of work (Table 3.2), lack of interactions with co-workers and students was ranked highest as a concern (54.4%) indicating the highly relational nature of work in the education sector. This was followed by concerns of increased workload (39.6%) and change in content and nature of work (23%).

Among health concerns amid the pandemic listed in Table 3.3, exposure to unsafe workspaces topped the list of respondents' concerns (17.4%), including availability of masks and sanitisers at workplaces (12.3%). 13.8% were concerned about the deterioration in mental health, while 8.5%, about getting professional help for physical and mental wellbeing. Respondents' concerns were more or less evenly

Table 3.1: Top 3 concerns at the time of the pandemic*

CONCERNS	RESPONSES	%
Job stability	201	8.0
Doing my job well	299	11.9
My students' learning	694	27.5
Economic situation	254	10.1
Health and safety	708	28.1
Emotional wellbeing	365	14.5
Total	**2521**	**100.0**

*Multiple responses allowed

Table 3.2: Respondents' concerns about student learning and the future of work

CONCERNS ABOUT WORK IN THE FUTURE	NO. OF RESPONSES (%)			
	RANK 1	RANK 2	RANK 3	TOTAL
Shift in mode of work to remote work or work from home	31.1	34.7	34.2	190
Change in content and/or nature of work	23.0	40.5	36.4	269
Increased duration of work	26.3	40.6	33.2	217
Reduced compensation	35.2	34.1	30.7	88
Increased workload	39.6	35.8	24.7	288
Loss of job and/or career	35.4	20.3	44.3	79
Loss of autonomy or freedom of work	13.6	43.5	42.9	154
Lack of interactions with co-workers or students	54.4	23.9	21.8	436

distributed across a wide range of aspects on maintaining their work life balance, with only 4% of respondents choosing the option 'none of the above'.

With regard to work-life balance (Table 3.4), the ability to maintain a routine was a concern for 14.4%; the lack of separation between work and personal life for 13.9%; and working without breaks, inability to disconnect from work, being constantly available for work for about 10% each.

Table 3.3: Physical and mental health concerns in view of the ongoing pandemic*

CONCERNS	RESPONSES	%
Exposure to unsafe workspaces	432	17.4
Lack of facilities for hand washing/sanitation at workplace	196	7.9
Availability of masks and sanitisers at workplace (for staff and students)	306	12.3
Lack of access to health care for myself and family	274	11.0
Worsening/deterioration of mental health conditions	343	13.8
Increase in use of tobacco, alcohol, and other substances	62	2.5
Staying connected to my family and community	343	13.8
Increase in domestic violence/abuse	76	3.1
Getting professional help for physical and mental wellbeing	212	8.5
Getting professional help to cope with grief and loss	89	3.6
None of the above	149	6.0
Total	**2482**	**100.0**

*Multiple responses allowed

Interview participants affirmed these concerns. They spoke about the 'shallow' quality of teaching and lower levels of learning among students in the online/remote mode. In some instances, the quality was low because of internet connectivity issues or lack of digital devices for the students and teachers. In others, technical issues in online teaching and the lack of preparedness of teachers for the shift posed hurdles for effective pedagogy.

The main concern to emerge from both the survey respondents and interview participants was regarding their students' learning. This response was analysed further in relation to concerns expressed by the respondents on different aspects of the future of their work, as discussed in the previous section. It can be seen that those who expressed their concerns about student learning also had concerns regarding other aspects of their future of work, such as the lack of peer and student interactions, increased workload, and change in content and/or nature of work (Table 3.2).

Table 3.4: Challenges in maintaining work-life balance during the pandemic*

CHALLENGES	RESPONSES	%
Lack of separate workspace	261	9.4
Maintaining a schedule/routine	398	14.4
Working without adequate breaks	279	10.1
Lack of separation between work life and personal life	384	13.9
Inability to properly disconnect from work	277	10.0
Being constantly accessible to work/colleagues/ students	299	10.8
Privacy concerns due to digital and online mode of work	290	10.5
Increase in domestic responsibilities	174	6.3
Increase in childcare responsibilities	174	6.3
Increase in care for older dependents	123	4.4
None of the above	111	4.0
Total	**2770**	**100.0**

***Multiple responses allowed**

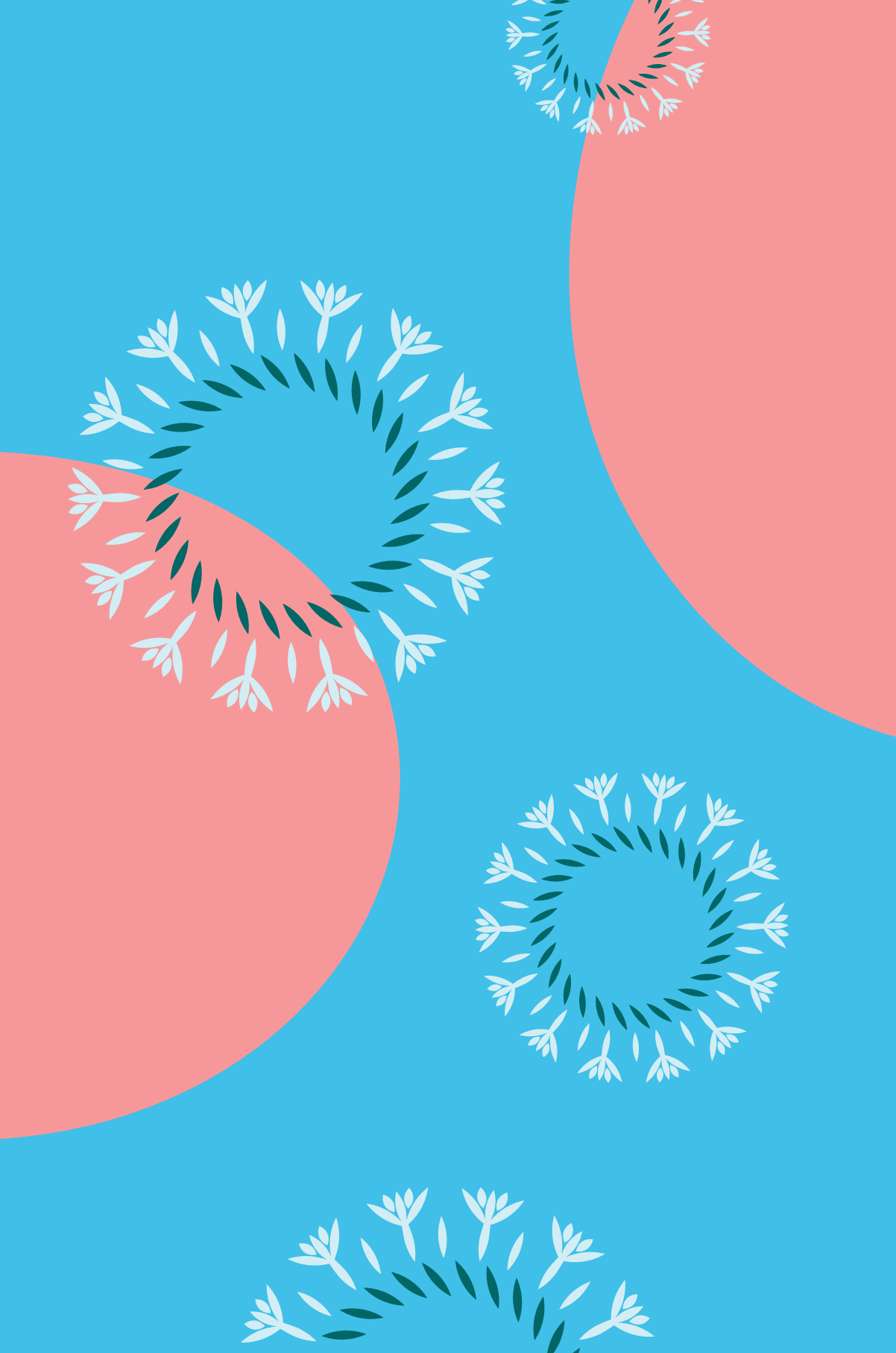
In the interviews, a teacher from Fiji shared that teachers' concern for quality of student learning prompted them to urge for the reopening of schools so 'teaching and learning can take place equally for all students'. At the same time, teachers were also concerned about their own and their students' physical safety when schools reopen. Interviewees from both Fiji and India called for the provision of necessary medical protection for teachers at the time of school reopening. However, as noted by a union staff member from Fiji, the responsibility of establishing COVID-related safety protocols in schools would fall upon teachers. A teacher from Japan also observed that teachers would be taking on additional responsibilities of disinfecting schools and maintaining COVID-related protocols. Both the union staff from Fiji and Japan expressed fears that reopening of schools and placing the responsibility of safety protocols on teachers would be putting them at risk of contracting the virus.

Interview participants shared the multiple challenges that online mode of work posed on their work-life balance and personal wellbeing.

The flexibility of work for teachers during the pandemic was not entirely desirable, as one union staff member put it, 'superiors can give them orders any time of the day. There is no differentiation between personal time because their superiors can give them orders at 6 AM or 12 at night'. According to a teacher from Indonesia, work had become 'borderless'. The so-called flexibility of working from home impeded managing both personal and professional time, as balancing familial and parenting responsibilities with work became an issue for many. Union staff members from Sri Lanka, Nepal, Malaysia, and the Philippines pointed out that the online mode of work meant that teachers were working throughout the day. In addition to teaching, professional development workshops and parent-teacher meetings all added to their workload. Some teachers recounted instances where their phone would ring continuously with messages of homework posted by students, which led to feelings of anxiety. Sri Lankan teachers reported that checking students' work was cumbersome in the digital mode. One teacher from Australia felt disappointment about the lack of recognition on the part of the school administration about how 'people are now working in vastly different working conditions'.

Summary

There is clear evidence that the employees in the education sector were concerned for their own physical health and safety and emotional wellbeing at the time of the pandemic. Their specific concerns pertained to being able to maintain a balanced routine and boundaries between their personal lives and work. Teachers were equally concerned about the quality and lack of their interactions with students in the online mode and the potential effects on student learning.



PART 4

Digital Technology/ ICT Access and Skills

This section explored the respondents' access to digital technology and their perceptions on their own skills and abilities with regard to the use of ICT for work and teaching-learning. Based on Section 2 of this report, work migrated online entirely or in part for over 70% of the respondents. Respondents reported spending increased hours on their digital devices for work during the pandemic compared to before. Given the predominance of the digital and online mode of work, the availability of requisite devices, knowledge, skills, and competence with ICT is highly relevant. A detailed account of the findings with respect to access, extent of use, and competence in digital technologies among the workforce are provided in the sections below.

4.1 Access to devices

Table 4.1 outlines the specific digital devices for work that the respondents had. Smartphones were the most used at 33.7%, followed by laptops at 29.8% (Table 4.1). There was not much variation by profile of work, but women had slightly better access compared to men (Tables 4.1, 4.1a).

Table 4.1: Access to digital devices for work based on work profile*

DEVICES	SCHOOLTEACHER	UNIVERSITY FACULTIES, EDUCATION SUPPORT PERSONNEL, AND OTHERS	TOTAL	PERCENTAGE OF GRAND TOTAL
Personal desktop computer	224	38	262	13.3
Laptop	487	101	588	29.8
Tablet	191	27	218	11.1
Smartphone	534	130	664	33.7
Basic mobile phone	86	19	105	5.3
Desk phone	72	14	86	4.4
Other ICT devices	22	7	29	1.5
None of the above	16	3	19	1.0
Grand total			**1971**	**100.0**

*Multiple responses allowed

Table 4.1a: Gender variation in access to digital devices*

DEVICES	FEMALE (%)	MALE (%)	NON-BINARY/ PREFER NOT TO SAY (%)	TOTAL
Personal desktop computer	46.6	53.4	0.0	262
Laptop	56.5	42.7	0.9	588
Tablet	58.3	40.8	0.9	218
Smartphone	49.7	49.8	0.5	664
Basic mobile phone	51.4	48.6	0.0	105
Desk phone	46.5	52.3	1.2	86
Other ICT devices	72.4	27.6	0.0	29

*Multiple responses allowed

Table 4.2: Subregional variation in access to digital devices*

SUBREGIONS	PERSONAL DESKTOP COMPUTER/ LAPTOP (%)	TABLET (%)	SMARTPHONE (%)	OTHER DEVICES (%)	NONE OF THE DEVICES (%)	TOTAL
North Asia	37.5	53.7	21.1	140.6	0.6	35.4
Pacific	20.6	26.1	14.0	42.1	0.1	18.1
South Asia	12.9	5.5	36.9	43.8	0.2	20.3
Southeast Asia	28.7	14.7	28.0	72.6	0.2	26.1
West Asia	0.2	0.0	0.0	0.9	0.0	0.2
Total	**850**	**218**	**664**	**106**	**19**	**1972**

*Multiple responses allowed

Table 4.3: Ranking of most used devices

NAMES OF DEVICES	PERSONAL DESKTOP COMPUTER	LAPTOP	TABLET	SMARTPHONE	BASIC MOBILE PHONE	DESK PHONE	OTHER ICT DEVICES
1 (most used)	137	356	22	298	31	3	12
2	53	151	98	250	37	34	7
3	63	49	106	108	55	56	34
4	39	25	61	36	41	50	33
5 (least used)	41	21	48	17	52	59	67
Total responses	**333**	**602**	**335**	**709**	**216**	**202**	**153**
(%)	13.1	23.6	13.1	27.8	8.5	7.9	6.0

The significant variation in access was across regions. Access to all types of digital devices, including desktops and laptops, was highest in North Asia, followed by Southeast Asia. Smartphones were the device most used by respondents in South Asia, where access to desktops or laptops was almost a third of North Asia and one-fourth of Southeast Asia (Table 4.2).

Table 4.4: Extent of ownership/access to the devices needed for work based on work profile

EXTENT OF OWNERSHIP/ ACCESS TO THE DEVICES	SCHOOL TEACHER (%)	FACULTY IN A COLLEGE/ UNIVERSITY (%)		EDUCATION SUPPORT PERSONNEL (%)	HEAD OF A SCHOOL/ COLLEGE/ UNIVERSITY (%)	OTHERS (%)	TOTAL
		TEACHER EDUCATION/ TRAINING	OTHER DISCIPLINES				
All the time or most of the time	73.7	85.0	93.5	66.7	76.5	74.3	684
Sometimes	23.8	10.0	6.5	33.3	23.5	20.0	210
None of the time	2.4	5.0	0.0	0.0	0.0	5.7	21

Table 4.3 lists down the devices from the most to least used. Smartphones and laptops were used most for work by respondents, by 27.8% and 23.6%, respectively. 356 used the laptop the most (59.1%).

In terms of ownership of devices (Table 4.4), out of a total 915 respondents, 684 had access to devices they needed for work all or most of the time. Among schoolteachers, 73.7% had access all or most of the time, while faculty in teacher education colleges had exclusive access to devices in 85% of cases. 23.8% teachers had access to devices some of the time, which was 10% in the case of faculty in teacher education colleges.

Less than half of the respondents (46.7%) said their institutions provided them devices they needed for work (Figure 4.1). Again, the regional disparities were noteworthy. In North Asia and the Pacific, 69.3% and 58.3% of the respondents received devices needed for work from their institutions, compared to 36.2% in Southeast Asia and 27.4% in South Asia, the lowest (Table 4.5).

4.2 Digital technologies for work

Table 4.6 shows the change in the respondents' use of digital devices and technology from before and during the pandemic. Respondents reported an overall increase in their use of digital devices and tech-

Figure 4.1: Devices needed for work provided by institutions

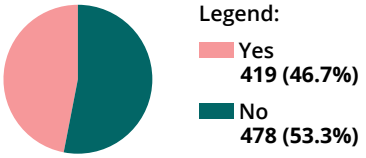


Table 4.5: Subregional breakup of devices for work provided by institutions

	% OF RESPONDENTS		
SUBREGION	YES	NO	TOTAL
North Asia	69.3	30.7	257
Pacific	58.3	41.7	144
South Asia	27.4	72.6	266
Southeast Asia	36.2	63.8	229
West Asia	100.0	0.0	1
Total	**419**	**478**	**897**

nologies during the pandemic compared to the pre-pandemic period. The increase was high in the case of programmes for video contact (4.5 times), learning management systems (2.7 times), and digital learning software (1.8 times). About 36% of the respondents said they never used digital learning software before the pandemic, while 13% or less never used all other forms of digital technologies. Respondents reported a slight decline in their use of other digital devices such as computers/ laptops, smartphones, and internet during the same period compared to the pre-pandemic period.

However, in terms of their level of competence in the use of technology, 17.4% ranked themselves as a novice, while 26.1%, as an advanced beginner. 12.3% ranked themselves at a novice level with the laptop, the device most used for work, while 29.2% said they were at an advanced beginner level. The technology that most respondents said they were novices at was digital learning software (33.9%), followed by learning management systems (27. 8%) (Table 4.7).

This means that there was a high usage of digital devices but low level of the requisite skills. Such a situation calls for systematic inputs to improve the effectiveness of the workforce, which was clearly missing. For a majority of the respondents, the means through which they

Table 4.7: Ranking of skills in digital technologies

DIGITAL DEVICES/ TECHNOLOGIES	NOVICE (%)	ADVANCED BEGINNER (%)	COMPETENT (%)	PROFICIENT (%)	EXPERT (%)	TOTAL RESPONSES
Computer/laptop/tablet	12.3	29.2	31.5	19.8	7.2	**860**
Smartphone	8.6	22.5	33.7	25.1	10.2	**886**
Internet search	7.8	24.4	33.1	23.6	11.2	**874**
Video platforms	15.4	27.9	31.3	19.1	6.4	**866**
Social media	17.0	21.8	32.2	21.1	7.9	**863**
Social communication tools	16.6	21.2	31.3	21.6	9.3	**867**
Learning management systems	27.8	27.8	24.6	14.7	5.1	**863**
Digital learning software	33.9	27.4	23.4	12.0	3.3	**858**
Programs for video contact in real time	19.4	31.6	28.0	16.3	4.7	**867**
Computer applications	15.1	27.6	28.9	20.8	7.5	**865**
Average	**17.4**	**26.1**	**29.8**	**19.4**	**7.3**	**867**

Table 4.8: Means of learning to use the digital technologies required for work

MEANS OF LEARNING	RESPONDENTS	%
Learnt through professional development courses offered by my institution	137	15.2
Learnt through my own initiative paid for by my institution	51	5.6
Learnt through my own initiative at my own cost	244	27.0
Learnt on my own with help from others	367	40.6
Still struggling to learn on my own	83	9.2
Not applicable	21	2.3
Total	**903**	**100.0**

learned to use digital technologies for work has been 'on their own with help from others' (40.6%) followed by 'through their own initiative at their own cost' (27%). Only 15.2% learned through professional development courses offered by their institutions (Table 4.8).

The qualitative interviews substantiated the views expressed in the survey with respect to learning to teach in the online mode. Interviewees reflected on the effects of the transition to online mode of teaching that meant using digital apps such as Zoom and Google Classroom. Teachers from Nepal, Sri Lanka, Fiji, Indonesia, Japan, and Australia said they learnt to use these platforms through peer support and collaboration. A colleague who had expertise in using the tools would come forward to help others with the technology. There were instances where those with the skills conducted online sessions for their colleagues at the beginning of online teaching to show how the apps worked and how they could be used effectively to interact with students. Most of them, however, said they had learnt to use these digital tools through their own efforts. As a teacher from Fiji put it, it was 'acquired through Google search, because we do not have expert training'. While most teachers recounted their struggles with technology, one teacher from Australia had always been interested in learning new skills, and online teaching provided an opportunity to enhance their digital skills.

As noted above, there were large gaps in the provisioning of digital devices required for work by institutions. This situation was further compounded in the case of many of the respondents (64.6%) who had to spend out of pocket for digital devices and materials required for their work, and which were not reimbursed by their institutions (Figure 4.2).

As shown in Table 4.9, the out-of-pocket expenditure was incurred mostly by schoolteachers for the purchase of smartphones (17.8%), laptops (13.1%), and internet devices (15.8%).

A trend that emerges reveals high expectations of usage of digital devices and tools for work but low levels of perceived competence and low professional inputs. 24.9% of the respondents said they found the lack of sufficient professional development opportunities as highly challenging, while 55.7% said it was somewhat challenging (Figure 4.3). A big 60.6% said they found access to learning resources somewhat challenging. The additional challenges related to using ICT for work included insufficient internet bandwidth (highly challenging for 31.9% and somewhat challenging for 48.5%), devices 'not working properly'

(highly challenging for 16.9% and somewhat challenging for 55.6%). 74.6% of respondents also found the availability of technical support for work as a challenge (Figure 4.4).

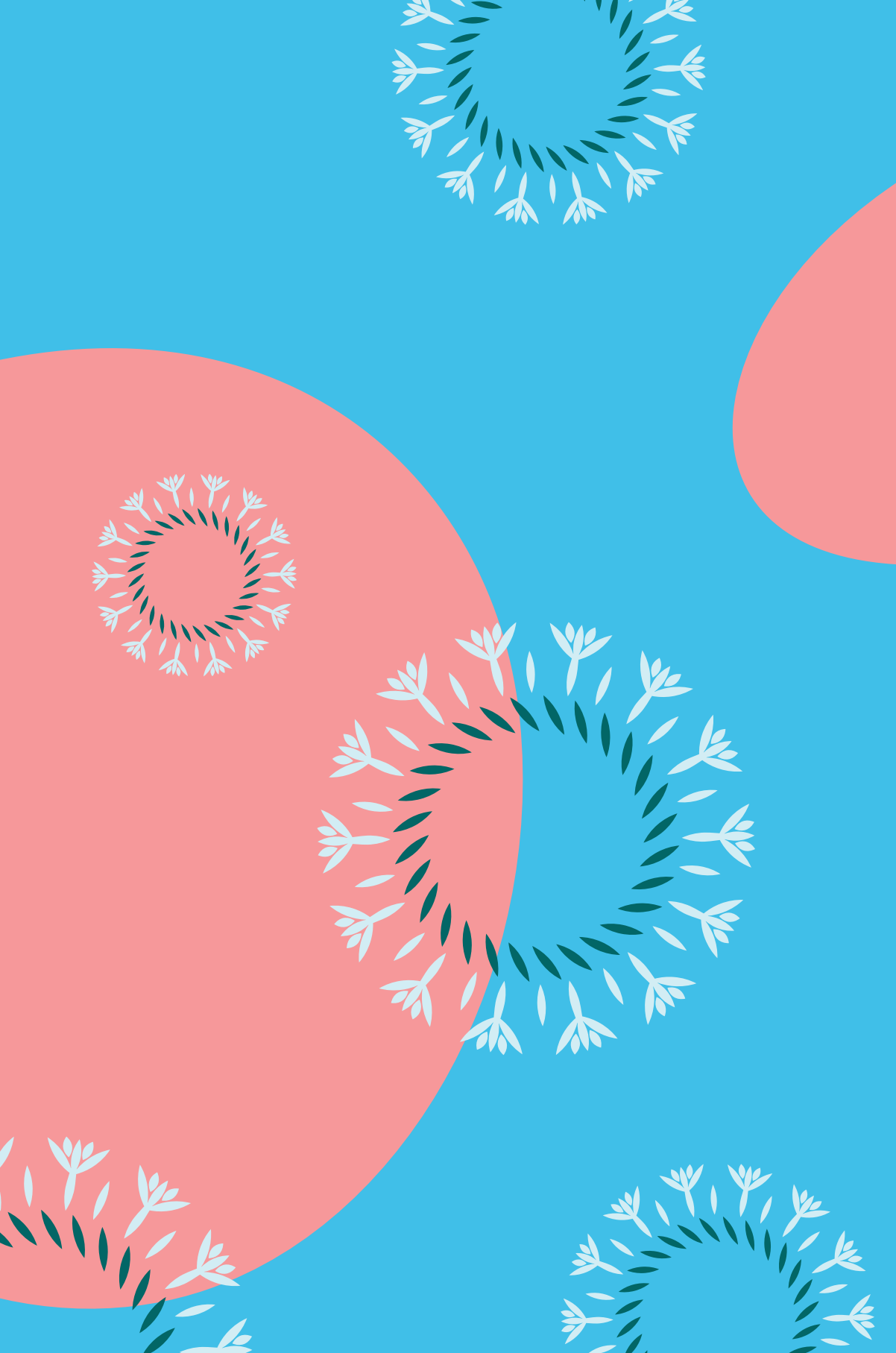
Figure 4.3: Levels of challenges in using digital technologies/ICT for workFigure 4.4: Availability of technical support with the use of digital technologies/ICT for work

Summary

While 43.1% of the respondents had access to a personal computer or laptop, this percentage falls well short when we consider the high extent of permeation of online modes of work. As nearly 50% of work had shifted entirely to an online mode and 20% more to a combination of online and distance modes (Table 2.2), this means that for nearly 30%, access to devices for online mode of work was either entirely absent or suboptimal. This is borne out by how over one-third among the respondents had to use a smartphone instead of a computer or laptop for work. Given that a sizeable proportion spent 8-10 hours or more on digital devices for work (Figure 2.5), adequate access to devices appropriate for the nature of work becomes a matter of major concern. Furthermore, there were important subregional variations noted in terms of access to digital devices used for work. South Asia had among the lowest (5.6%) in the availability of personal computers and laptops, while North Asia had the highest (16.2%). This is clearly an indication of underlying inequities in digital access, even for teachers in secure employment conditions across different subregions.

The survey clearly shows that in less than half of the cases (46.7%) did institutions provide the devices needed for work, while about 64% of respondents incurred out-of-pocket expenditures for devices and materials that their institutions did not reimburse. This type of expense was incurred mostly by teachers for the purchase of smartphones, laptops, and internet devices. Although most of the respondents had used digital devices before the pandemic and the online mode, there were many gaps in the knowledge and skills in using such digital devices for work. A majority of them ranked themselves as either a novice or an advanced beginner with respect to using a range of digital devices and edtech software. About 43% ranked themselves as advanced beginners

or novices in the use of technologies required for day-to-day work. Amid the relatively low level of self-reported competence on the use of digital technology, a large majority (67.6%) said they had to learn on their own, or with some help from others, or at their own cost. This is a clear indication of lacunae in the provision of systematic training and professional development in the use of digital technologies for the workforce in the sector.



PART 5

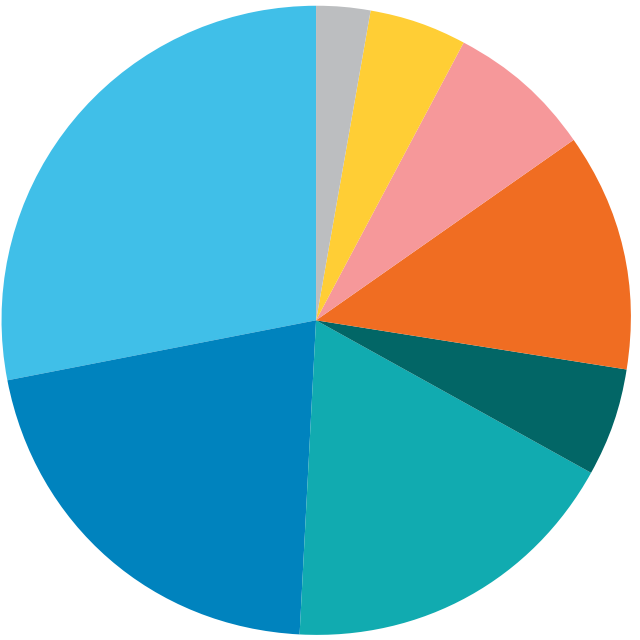
Professional Development in Education Technology

As the previous section showed, the high permeation of digital technologies and online mode of work was not matched by accessibility to these devices and digital skills among the workforce. This section further explores the nature and extent of professional development that the respondents received in the use of digital technology.

The large gaps in professional development inputs were evident from the survey. Just 55% of the respondents said they had received training in digital technologies, with 37.4% saying they did not. Among those who did, the source of their training was from their school, college or university (27%), government departments (21.8%), teacher training institutions (17.6%), teacher unions (12.2%), professional networks (7.6%), private companies (5.6%), and informal communities (5.1%) (see Figure 5.1).

Interesting subregional variations emerged with respect to the source of training. For the Pacific, North Asia, and Southeast Asia, the top provider was the school or institution of employment. For South Asia, on the other hand, government departments provided most of the training (Table 5.1).

Figure 5.1: Institution/agency that provided professional development in digital technologies in education*



Legend:

- School/College/ University **236 (27.8%)**
- Government departments **180 (21.2%)**
- Teacher training **150 (17.6%)**
- Private companies **48 (5.6%)**
- Teacher unions **104 (12.2%)**
- Professional networks **65 (7.6%)**
- Informal communities **43 (5.1%)**
- Don't know/ can't say **24 (2.8%)**

*Multiple responses allowed

During the interviews, some teachers mentioned going through training sessions conducted by their schools/departments of education and teacher unions. A teacher from Australia said their department of education posted a lot of useful live and recorded videos, and their union ran a podcasting series. A teacher from Indonesia had attended webinars held by their union nearly every week. A participant from the Philippines, on the other hand, said there was either a lack of or inef-

Table 5.1: Subregional distribution of top 4 institution/agency that provided professional development in digital technologies in education

SUBREGIONS	GOVERNMENT DEPARTMENTS (%)	SCHOOL/ COLLEGE/ UNIVERSITY (%)	TEACHER TRAINING INSTITUTIONS (%)	TEACHER UNIONS (%)	TOTAL
North Asia	22.7	41.8	19.9	15.6	141
Pacific	24.4	52.9	14.3	8.4	119
South Asia	35.3	12.7	31.3	20.7	150
Southeast Asia	25.5	36.7	22.4	15.4	259
West Asia	0.0	0.0	0.0	100.0	1

ficiency in the training provided by the education department to meet the professional demands of those affected.

Table 5.2 shows the areas that the respondents considered important in professional development. They were asked to order a range of areas as either low, medium, or high priority based on their needs. All areas listed were selected by respondents as being high or medium priority. Only about 6-8% of respondents had selected the areas as low or not a priority for them. The distribution of responses was even across all the options, with 'managing and orchestration of digital technologies for teaching and learning' and 'selection, creation and sharing of digital resources' described as 'high priority' by 53.9% and 43.1% of respondents, respectively. Among those areas that were described as 'medium priority' included teaching-learning (39.6%) and digital resources (48.7%).

Summary

The gap in the systemic provision of training in digital technologies noted in previous sections is compounded by low levels of professional inputs. 37.4% of survey respondents had not received any training at all

Table 5.2: Priority areas for professional development in use of digital technologies

AREAS OF PROFESSIONAL DEVELOPMENT	LOW/ NOT A PRIORITY	%	MEDIUM PRIORITY	%	HIGH PRIORITY	%	TOTAL RESPONSES
Professional engagement: using digital technologies for communication, collaboration and professional development	65	7.7	389	46.4	385	45.9	839
Digital resources: selecting, creating/modifying, protecting and sharing digital resources	68	8.2	403	48.7	357	43.1	828
Teaching and learning: managing and orchestrating the use of digital technologies in teaching and learning	54	6.5	330	39.6	449	53.9	833
Assessment: using digital technologies and strategies to enhance assessment	69	8.3	393	47.5	365	44.1	827
Empowering learners: using digital technologies to enhance inclusion, individualisation and learners' active engagement	51	6.2	379	45.7	399	48.1	829
Facilitating learners' digital competence: enabling learners to creatively and responsibly use digital technologies for information, communication, content creation, wellbeing and problem-solving	57	6.9	352	42.6	418	50.5	827

in the use of digital technologies for education. In cases where training was provided, it was the schools and institutions in North Asia, Pacific, and Southeast Asia, while it was the government departments that did so in South Asia. An overwhelmingly high percentage of respondents expressed the need for professional development in almost all the different areas listed in the survey, with teaching-learning with digital technologies emerging as the highest priority for 53.9%, followed by facilitation of learners' digital competence for 50.5%.

PART 6

Change in Work Environment due to Digital/Remote Teaching and Learning

The sudden shift to an online and remote work environment due to the pandemic placed unique demands upon the workforce in the education sector. The previous sections provided insights into the extent of permeation of digital technologies into the sector, as well as their digital skills and professional development needs. In this section, respondents were asked to provide their perceptions about the changes that would take place in the work environment with regard to the use of digital and remote technologies for teaching and learning in the education sector.

A large majority of the respondents (88.4%) said they expected the use of digital technologies to continue into the future in the post-pandemic period (Figure 6.1). However, when asked to rate their own level of preparedness for such changes in their work, only one-fourth of the respondents (25.4%) felt they were well prepared for this shift, while a majority (55.7%) felt they were somewhat prepared (Figure 6.2).

Figure 6.1: Respondents expecting use of digital technologies in education in the future

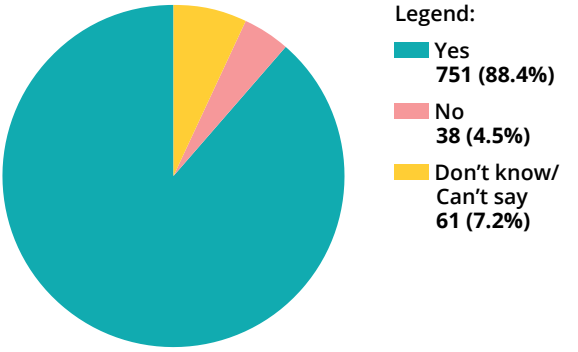


Figure 6.2: Perception of level of preparedness for the changes in work in the future

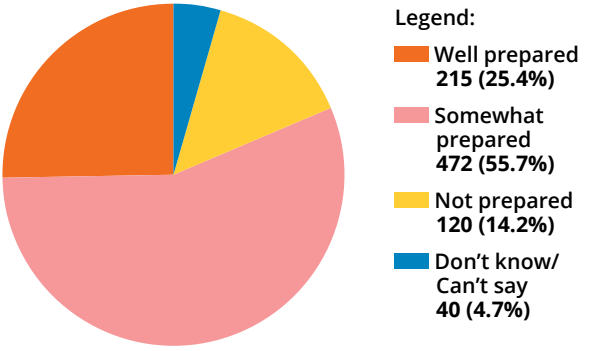
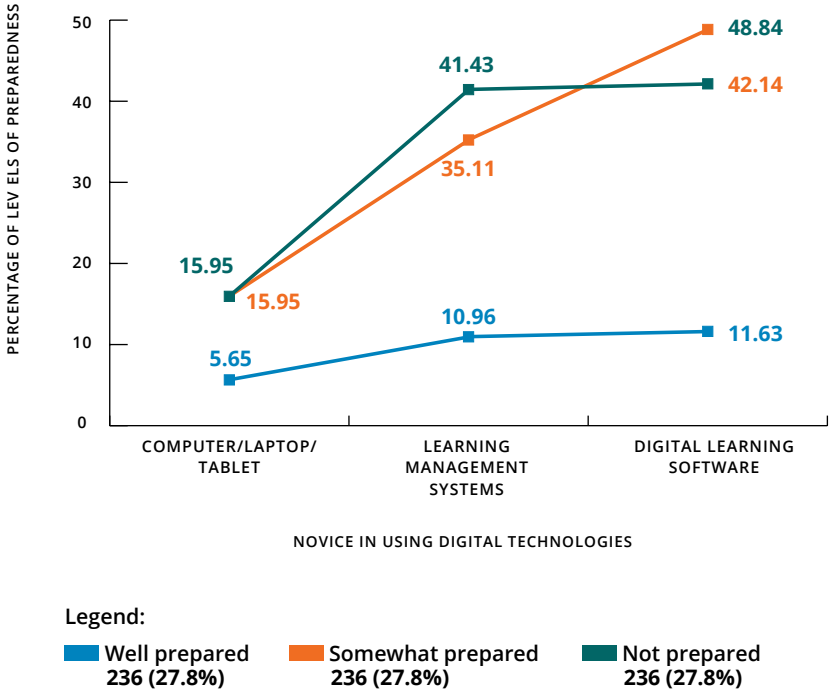


Figure 6.3 shows the comparison between the respondents' self-assessment of their skills in digital technology and their self-reported levels of preparedness. Interestingly, a high percentage of respondents who said they were 'not prepared' or 'somewhat prepared' for the changes of work in future also described themselves as 'novices' with regard to specific digital skills. With respect to the use of computers, only 5.6% of respondents who said they were well prepared assessed themselves as novices, whereas 16.4% of those who said they were not prepared had described themselves as novices at the same skill. A similar pattern is noted in the use of learning management systems and digital learning software. A high percentage of respondents who reported themselves as novices also reported that they were not prepared or somewhat prepared. This clearly indicates that respondents linked their level of skills and competence in the use of digital technologies to their extent of preparedness for the future of work.

Figure 6.3: Novice in using digital technologies in relation to preparedness for changes in future of work



Another interesting linkage could be seen between perceptions of being 'not prepared' for the future of work and concerns about the future of work, as shown in Table 6.1. The types of concerns were similar to the trend observed earlier in relation to the future of work, i.e., concerns related to lack of peer and student interactions, increased workload, and change in nature of work. However, the percentage of respondents with concerns about the change in content and nature of work was much higher among those that perceived themselves as being unprepared for the future of work. These individuals were less concerned about the increase in their workload as compared to the others. It is evident that concerns about changes in content and nature of work in the future are linked to their concerns about being unprepared for these changes.

The qualitative interviews invited participants to share their views on the changes in the future of work with regard to inclusion of tech-

nology and consequent changes in their profession. Participants shared diverse views on the future of digital technology in education and its potential impact on the future of their work. Across all the countries, participants felt that digital learning technologies would continue in the future. However, those from India, Sri Lanka, and the Philippines were less optimistic and questioned the so-called success of digital technologies in their respective countries. They argued that digital learning technologies should support and supplement the teaching-learning process in the school and enable the teacher to prepare the teaching material better and provide students the opportunity to further explore learning. All three participants from South Asian countries mentioned that though the use of digital technologies will continue, teachers will tend to fall back on the traditional ways of teaching. In their view, with minimal resources and a lack of internet availability in government schools, digital technologies would be mere rhetoric.

A union staff member from Japan reiterated that the use of digital technology may change the role of the teacher, but it will never be able

Table 6.1: Concerns about work for those 'not prepared' for changes in work in the future

CONCERNS WITH REGARD TO THE WORK IN THE FUTURE	% OF RESPONSES			TOTAL RESPONSES
	RANK 1	RANK 2	RANK 3	
Shift in mode of work to remote work or work from home	33.3	16.7	50.0	24
Change in content and/ or nature of work	40.0	30.0	30.0	50
Increased duration of work	24.4	42.2	33.3	45
Reduced compensation	66.7	16.7	16.7	18
Increased workload	28.1	46.9	25.0	64
Loss of job and/ or career	33.3	41.7	25.0	12
Loss of autonomy or freedom of work	9.7	41.9	48.4	31
Lack of interactions with co-workers or students	54.8	21.0	24.2	62

to replace the teacher. Participants from Fiji and India also asserted that teachers cannot be replaced by technology in classrooms and argued for the need to treat technology only as an additional supporting mechanism when the face-to-face mode resumes. According to them, the transition to online teaching would continue, but digitisation of teaching-learning will disadvantage children with disabilities. A union staff member from India said they were worried that many more teachers would lose their jobs with the introduction of technological devices in schools. According to them, this would exacerbate the existing situation which was already a concern: the appointment of under-qualified people as para teachers with minimal pay.

Interviewees believed that the new modes of teaching and learning posed high demands on teachers, who are required to adapt quickly. Participants from Japan, Australia, and the Philippines stated that the demands of the teaching profession have already increased teachers' attrition rate. They shared diverse views on the future of digital technology in education and its potential impact on the future of their work. Teachers found it challenging to handle the situation, and many were planning to retire early as they could no longer adapt to the rapidly changing decisions of the education department.

The need for specific inputs to equip oneself for work in the future emerged quite clearly from the survey. Figure 6.4 shows these needs identified by the survey respondents. The top three choices for a majority of the respondents were professional knowledge (23%), technical support (22.9%), and access to ICT devices (21.7%). Laptops and desktops were the top choice for 20% of the respondents when asked about the devices or amenities needed to work effectively, followed by internet devices (19.2%) and smartphones (16.9%) (Figure 6.5).

In terms of future support, interview participants identified a number of areas: improvement in teachers' salaries, provision of healthcare, increasing access to and availability of technical devices and internet connectivity, increased opportunities for continuous training, reduction in teacher-student ratio, and a review of the current school curriculum and teacher education curriculum. A union staff from Malaysia noted that teachers will need multiple skills for the future and must be prepared as researchers, analysts, planners, collaborators, curricular experts, and problem solvers. They must have strong 'bilingual capabilities, adapt and grow with the current changes'.

Figure 6.4: Needs to equip oneself for work in the future*

Legend:
- Professional knowledge **501 (23.0%)**
- Access to ICT devices **473 (21.7%)**
- Technical support **499 (22.9%)**
- Professional autonomy **114 (5.2%)**
- Better working conditions **326 (15.0%)**
- Professional skills **264 (12.1%)**

*Multiple responses allowed

Figure 6.5: Devices/software and amenities needed to work effectively*

Legend:
- Internet devices **649 (19.2%)**
- Laptop/desktop **705 (20.9%)**
- Smartphone **572 (16.9%)**
- Software/s **424 (12.5%)**
- Printers **441 (13.0%)**
- Table and chair **295 (8.7%)**
- Books/stationery **269 (7.9%)**
- Others **(0.9%)**

*Multiple responses allowed

According to this interviewee, there is a need to make the selection process for teachers more stringent in light of these new demands. A teacher from Australia and from Japan advocated for more time for actual class preparation and time for collaboration with colleagues as well as for professional learning. Participants from Fiji, Nepal, the Philippines, and Indonesia demanded access to free internet and regular training to ensure the students' engagement in teaching and learning.

The change of work to digital and remote mode generated much cause for concern due to several reasons. As Table 6.2 indicates, the respondents noted excessive screen time as a top concern (36.2%), followed by cyberbullying and online harassment (25.3%), workload intensification (23%), work life balance (20.7%), and data privacy (15%).

The respondents also highlighted the challenges that students faced at the time of the pandemic with respect to digital or remote learning (Figure 6.6). About 40% felt that almost all the aspects of learning during the pandemic were challenging for most of their students. Most severely challenging were poor internet connectivity (356) and lack of access to devices (333), followed by economic pressures in their families (325). Many respondents also noted that a lack of space to study was a challenge for either some of their students (311) or half of their students (195).

Table 6.2: Main concerns with increase in the online mode of work, including online teaching and learning

	RANKING*(% OF RESPONSES)					TOTAL
CONCERNS	1	2	3	4	5	RESPONSES
Cyberbullying and online harassment	25.3	14.4	13.6	15.3	31.5	590
Health concerns (e.g., technostress and screen time)	36.2	21.4	23.1	12.1	7.1	635
Online data privacy concerns	15.0	20.3	23.8	26.4	14.6	602
Workload intensification	23.0	27.6	20.2	17.3	11.8	608
Work-life balance	20.7	24.2	22.8	13.9	18.4	685

* 1 – 'biggest concern' and 5 – 'less of a concern'

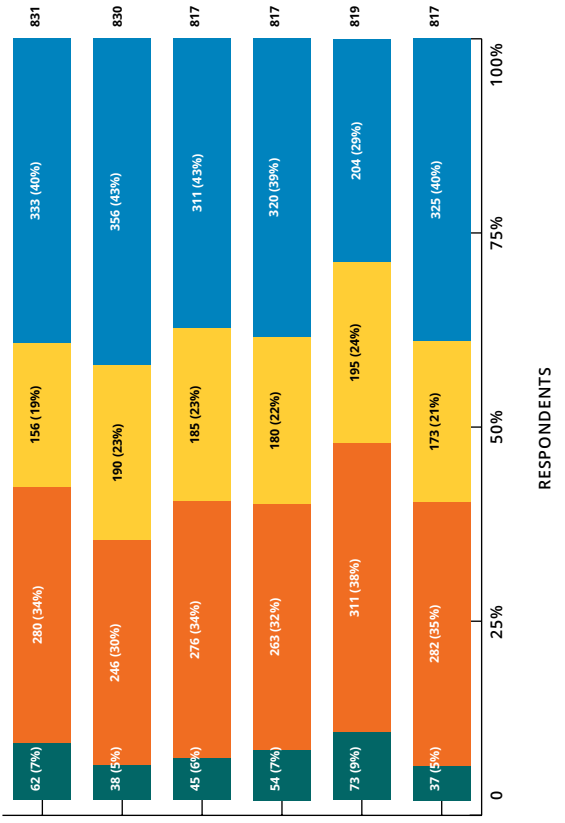
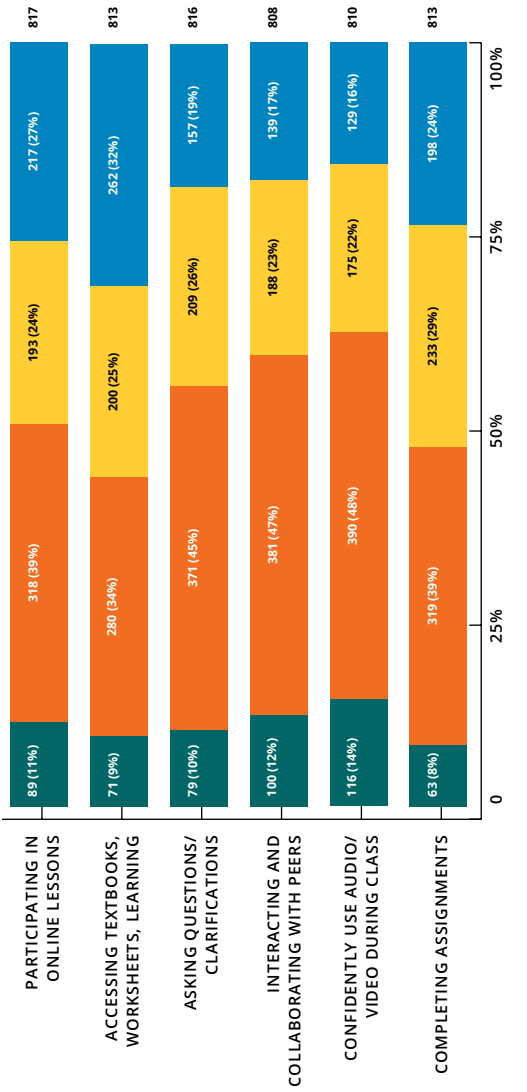


Figure 6.6: Challenges students faced at the time of the pandemic

Figure 6.7: Students' adaptation to digital/remote learning



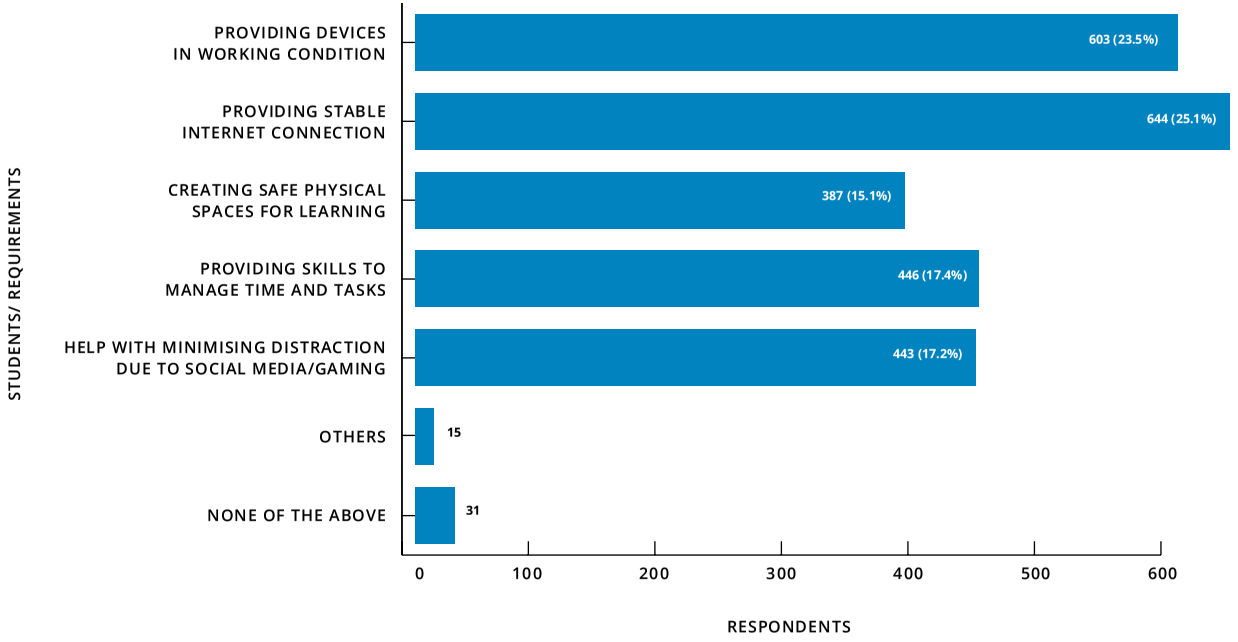
Consequently, students' ability to adapt to the online or remote modes of learning were curtailed, as found from educators' responses (Figure: 6.7). Accessing learning materials such as textbooks was a challenge for most of their students, as noted by many respondents (262). Most aspects of online learning became a challenge for some of their students, the most notable being confidence in using audio/video during sessions (390), interacting with peers (371), and asking questions (371).

In particular, the teachers Interviewed from Fiji, Nepal, the Philippines, India, and Sri Lanka shared their discontent regarding the reach of online classes. Reflecting on the socio-economic context of their countries, participants from India, Sri Lanka, and Nepal observed the lack of digital devices among students and the practical challenges of providing one digital device per child throughout the academic term. In some cases, children had moved to their hometowns and were out of reach. Teachers also highlighted the disparities within their countries amongst children from well-to-do families compared to children from less-privileged backgrounds, as well as issues of accessibility in rural locations. Teachers faced several limitations in this mode of teaching as well. A teacher from Fiji said they could not provide support to all children, set clear expectations, or spend quality time with them, while a teacher from Nepal noted the difficulty in assessing learning effectively.

Teachers expressed concerns about the increase of screen time for themselves as well as their students. In many instances, the increased interface with the screen has also increased the likelihood of children playing video games. A teacher from Nepal had noticed students playing video games during and after online classes. A teacher from the Philippines added that parents did not consider online teaching as real learning and looked at it as nothing more than playing video games. Such an attitude from parents poses unique challenges to teachers who are trying to make learning possible in difficult circumstances.

Children were comfortable with the use of technology, but teachers were worried that online classes hindered their students' intellectual, moral, physical, and social development. A teacher from Sri Lanka echoed these concerns, stating that due to extended periods of lockdown, children were not able to socialise and were becoming less empathetic. A teacher from Japan raised concerns about the limitation

Figure 6.8: Students' requirements to better adapt to digital/remote learning*



*Multiple responses allowed

of online teaching, especially for the children with disabilities who, in this teacher's view, needed more experiential learning.

According to the respondents, among the students' top requirements in order to adapt better to the digital/remote modes of learning include the provision of working devices and stable internet connection (23.5% and 25.1%, respectively), as well as support with managing time and tasks (17.4%) and creating safe physical spaces for learning (15.1%) (Figure 6.8).

Summary

A large majority of the respondents (88.4%) expect digital technologies would continue into the future of their work, but their assessment of their own preparedness for these changes was less than optimistic. A large percentage reported a variety of challenges faced not just by themselves but also by students in the digital learning environment. Only about a fourth of the respondents felt they were 'well prepared' for changes in the future of work. It is interesting to note that there was a link between ranking oneself as a 'novice' in the use of different digital devices and technologies and lower levels of confidence in one's own preparedness for the future of work. Clearly, this is an indication that professional training for competence in digital technology is an important factor that contributes to being prepared for the future of work. This is reflected in the respondents' choices of inputs required to prepare themselves for the future of work, which were distributed almost equally across professional knowledge, access to ICT devices, and technical support.

PART 7

Teaching and Curriculum

This section of the survey was specifically for schoolteachers or faculty who had directly taught in the online/remote mode at the time of the pandemic. Teachers were asked about their experience of online teaching-learning, the areas that became challenging for themselves and their students, and suggestions for improvements in the future and their own needs for professional development.

Out of the 835 respondents in this section, a majority (67.4%) had taught in the online mode at the time of the pandemic. Figure 7.1 shows a more or less even spread across different disciplinary areas, such as the social sciences (17.2%), arts (17%), professional courses (16%), humanities (15%), and sciences (14.9%).

Figures 7.2 shows how the support for their own professional needs as teachers came mainly from colleagues (38%), institute leadership (21%), unions (20.2%), and professional groups (14.3%). As shown in Figure 7.3, 60.8% of the respondents reported that they 'often' accessed online resources for self-learning, while 34.5% reported that they did so 'sometimes'.

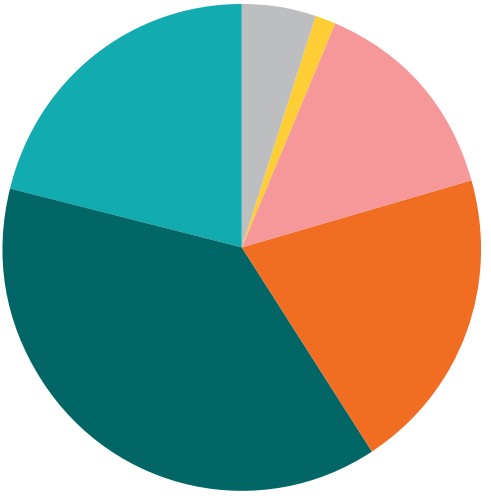
As seen in Figure 7.4, interestingly, just over a quarter of the respondents (25.3%) did not have access to materials in the preferred language of their students. School textbooks were the type of resource

Figure 7.1: Disciplinary areas of who have directly taught in the online mode at the time of the pandemic*

Legend:
- Sciences **124 (14.9%)**
- Humanities **128 (15.3%)**
- Arts **142 (17.0%)**
- Social Sciences **144 (17.2%)**
- Professional courses education **134 (16.0%)**
- Other professional courses **43 (5.1%)**
- Others **120 (14.4%)**

*Multiple responses allowed

Figure 7.2: Source of support for professional needs as a teacher*



Legend:
- Institute/leadership **212 (21.0%)**
- Colleagues **384 (38.0%)**
- Union **204 (20%)**
- Professional groups **145 (14.3%)**
- Others **(1.4%)**
- No one **52 (5.1%)**

*Multiple responses allowed

Figure 7.3: Frequency of accessing online resources for self-learning

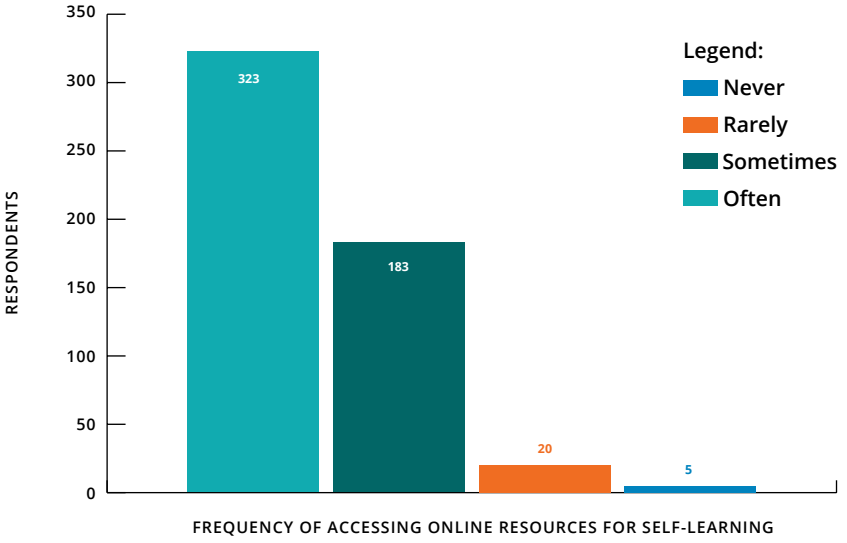
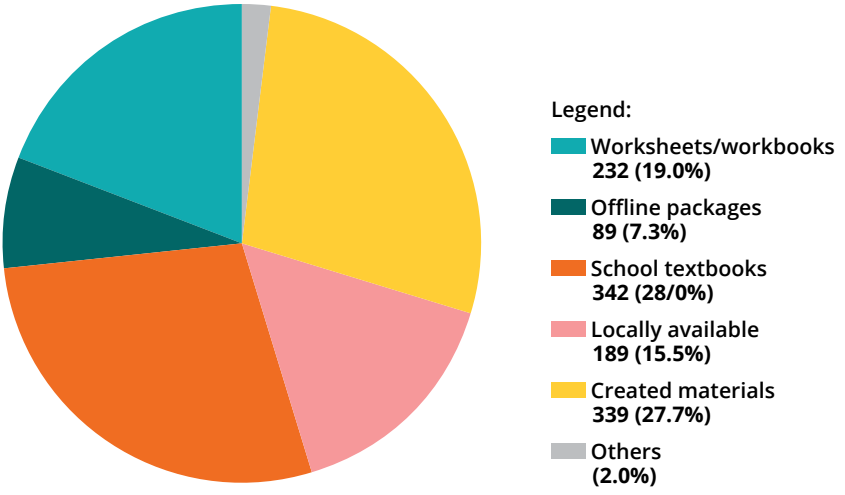


Figure 7.4: Resources for teaching used at the time of the pandemic*



*Multiple responses allowed

Figure 7.5: Challenges with specific aspects of online/remote teaching

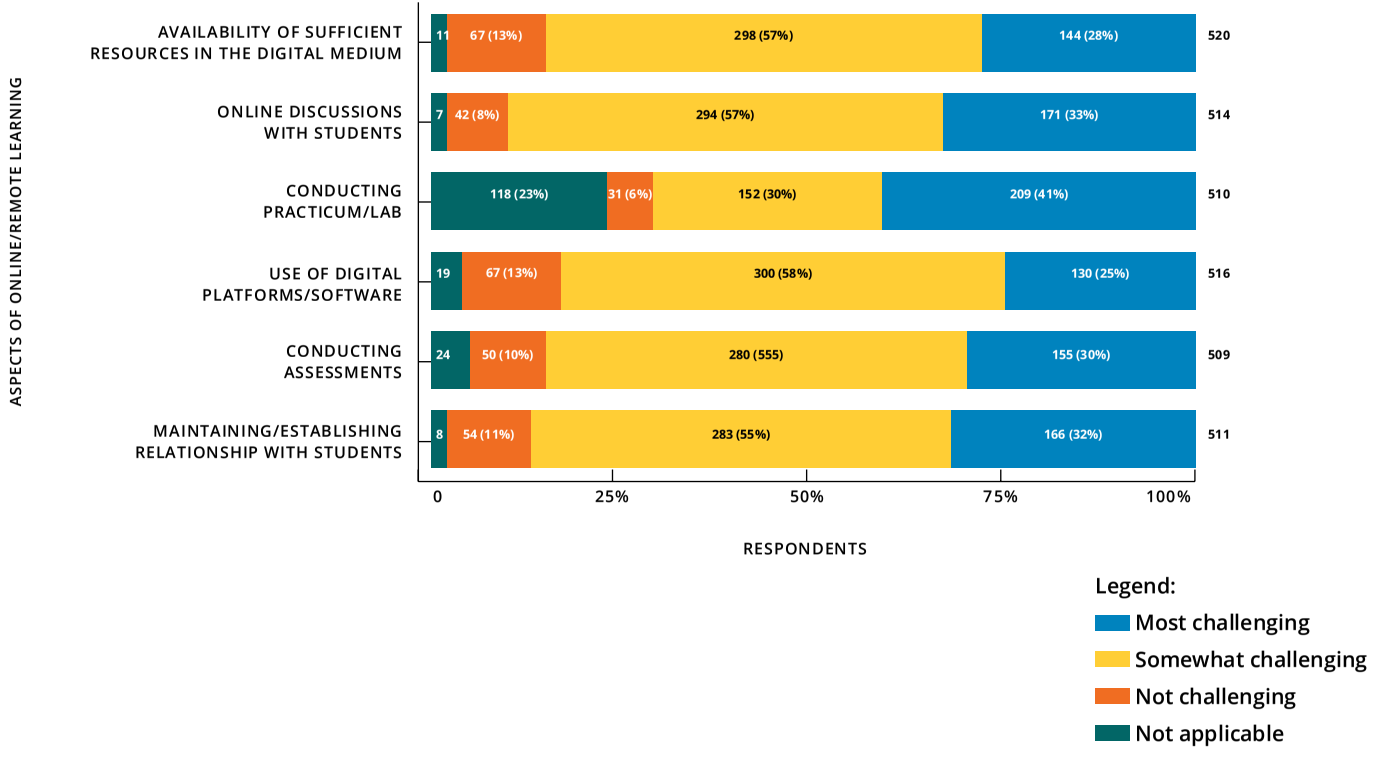
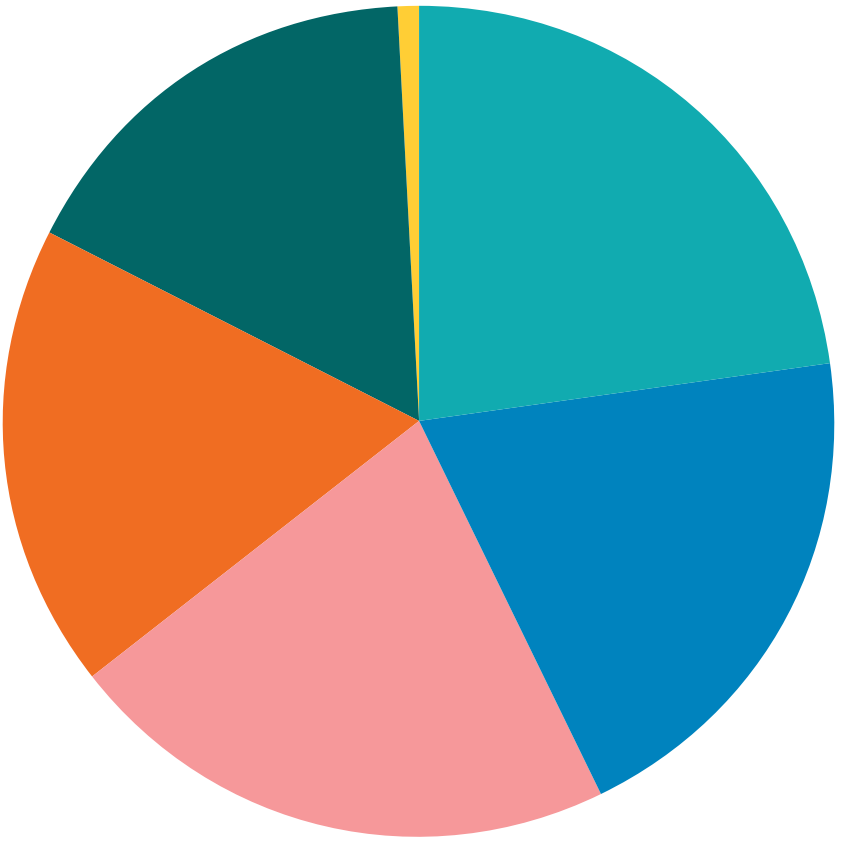


Figure 7.6: Suggestions to address challenges of online remote mode of teaching*

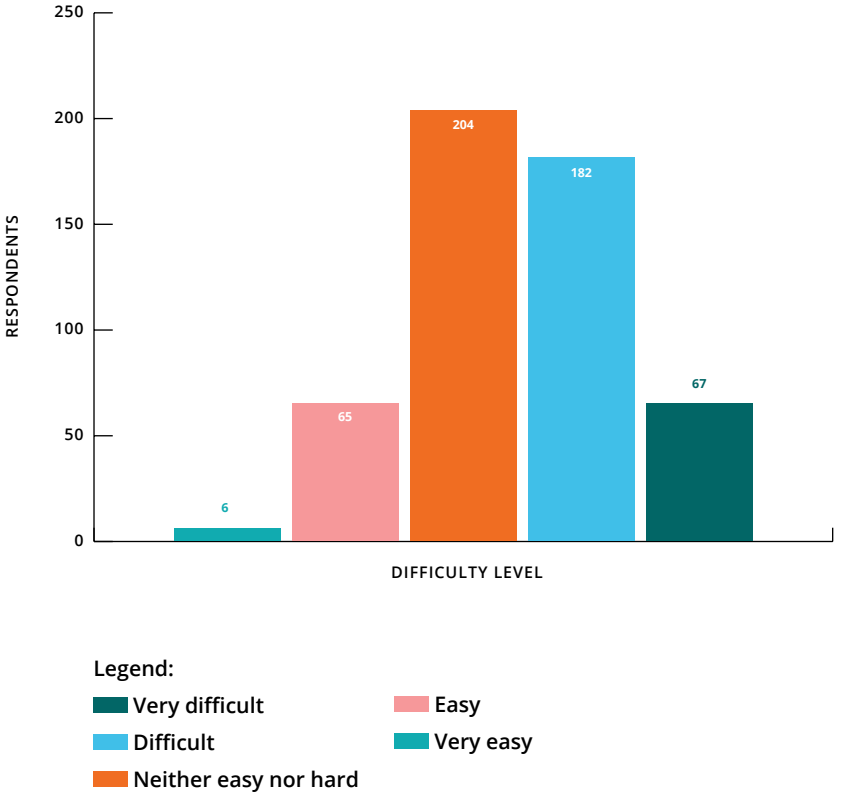


Legend:

- Provide adequate resources for teachers in the digital medim **396 (23.0%)**
- Support in attending to students' learning needs **371 (21.6%)**
- Support in adapting to the online/remote mode of teaching **344 (20.0%)**
- Support in assessment and evaluation in the online mode **309 (18.0%)**
- Curricular revisions better suited to the online/remote teaching **288 (16.8%)**
- Others **(0.60%)**

*Multiple responses allowed

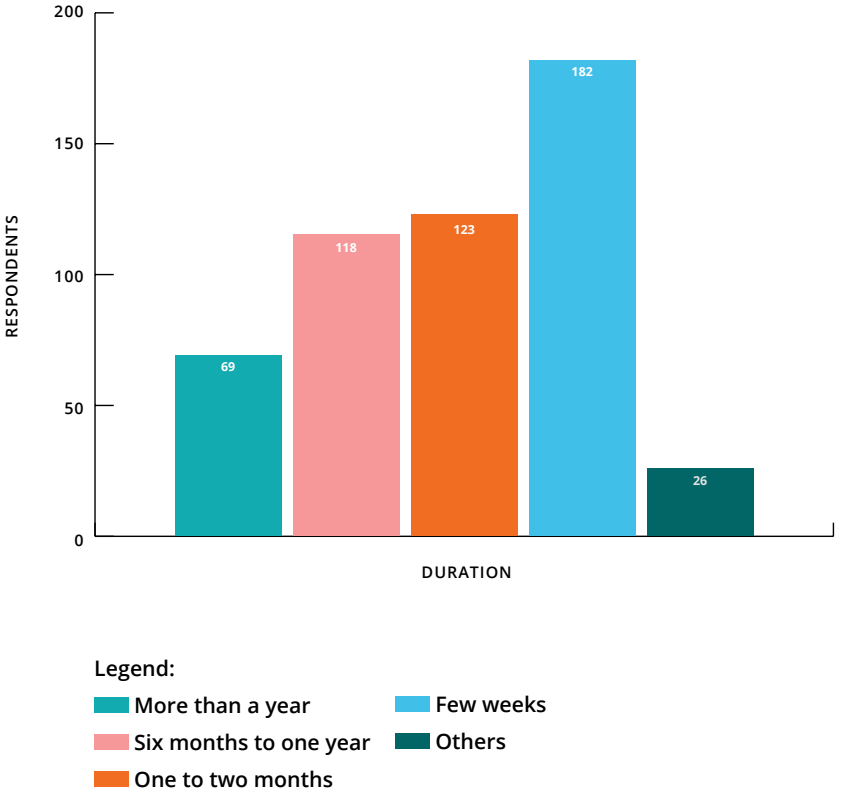
Figure 7.7: Rating of overall experience with online/remote teaching due to the pandemic on a scale from 'very easy' to 'very difficult'



that teachers relied on the most for their teaching at the time of the pandemic (28%), but an almost equal percentage of respondents (27.7%) had created their own materials to use in their teaching. Some relied on locally available materials (15.5%) as well as worksheets and workbooks sourced from outside their institutions (19%).

Inevitably, most teachers (41%) found conducting practicum and lab sessions to be the most challenging at the time of the pandemic (Figure 7.5). Other aspects of online teaching that teachers reported as 'most challenging' were conducting online discussions with students (33%), maintaining relationships with students (32%), and conducting assessments (30%).

Figure 7.8: Duration of training that will be needed to adopt skills for online/remote mode of teaching



On how to improve teaching in the online mode (Figure 7.6), the highest number of teachers identified the need for adequate resources to be provided to them in the digital medium (23%), followed by support in attending to student needs (21.6%) and support in adapting to the online/ remote mode of teaching (20%).

Interview respondents were expansive about their concerns over the decline in the standard and rigour of the curriculum in the online mode. As one union staff from Sri Lanka observed, the inability to teach the requisite syllabus and prepare students adequately for entrance exams was a major concern for teachers. According to a union staff from Fiji, if students continued to learn in an ineffective manner, it

would impact their human resource potential in the future. The present scenario made parents and teachers anxious about students' future. Keeping students engaged has also been a continuous challenge for most teachers, with their face-to-face classroom management practices rendered either irrelevant or ineffective in the online teaching mode.

In the case of a participant from an international school in Indonesia, there were already materials in digital form, so the transition to an online mode was easier. Some teachers from Fiji, Nepal, and Indonesia had also prepared digital learning material for students. However, not all teachers had the time and resources to create their own materials, and they had to use their own creativity to find resources to collaborate with others in order to facilitate their students' learning. Teachers from India, Malaysia, and Australia mentioned that a national level repository of teaching material was being developed and made available for teachers to use. The teacher from Australia appreciated the online materials developed by their department of education for use by teachers, while the teacher from India felt dissatisfied with the quality of the material developed by the state-level bodies in their country. The material was text heavy and did not promote learning and could only be used for practice and assessment.

Most teachers in the survey found the online mode of teaching 'difficult' (34.7%) or 'very difficult' (12.8%), although a good number seemed to be undecided, saying that they found it 'neither easy nor difficult' (38.9%) (Figure 7.7). Asked to assess the length of training necessary to adopt skills necessary for the online/remote mode of teaching, a majority said a few weeks (35.1%), while a large number felt it could take 1-2 months (23.7%) or even six months to one year (22.8%) (Figure 7.8).

Lastly, teachers were asked to share strategies that they had employed in their online/remote mode of teaching to help improve their students' learning experiences. In the survey, this was posed as an open-ended question. Among the 105 responses, 21.9% said they had created videos, about 17.1% had curated videos, and 15.2% had used additional software to reach out to students from using email communications to specialised software (e.g., Padlet, Mentimeter, Kahoot etc.). Many reported they involved parents (11.4%) or had used games to engage students in a fun, hands-on manner (6.8%). Several teachers also reported creating additional audio content (7.6%) for

their students and creating group messaging applications (WhatsApp, Telegram; 5.7%).

Interview participants elaborated on these different strategies, including using the affordances of digital platforms, friendship groups, small group activities, and so on. A teacher from Nepal encouraged students to develop slides, videos, and documents on the discussion topics. A teacher from Sri Lanka created opportunities for children to socialise by conducting storytelling sessions.

Interviewees also shared some positive features of the online/remote mode of teaching and the use of digital platforms. Teachers from Fiji, Australia, and Indonesia were more comfortable with digital technologies. They specifically appreciated the opportunity to learn various online resources and platforms available for teaching. Australian teachers said online teaching-learning allowed otherwise reserved students to take a more active part in the class. The feedback process was more individualised, too, because teachers were required to give written audio-recorded feedback to each child. Teachers from Sri Lanka and Nepal were positive about the availability of resources and increased students' participation in the online mode. Finally, a teacher from Sri Lanka noted that children were motivated to complete worksheets on the digital platform much more compared to paper-pencil work.

Summary

The teachers who responded to this section were spread evenly across subject and disciplinary areas. In terms of support for their professional needs, most accessed online resources for self-learning or had to reach out to colleagues for support. This aligned with the trend observed in the previous sections on gaps in systemic professional development opportunities that forced individuals to learn on their own and reach out to colleagues for support. Despite the non-conventional online mode of teaching-learning, the resources that were most useful were predominantly conventional materials, such as textbooks

and other print materials. About a quarter of the respondents said materials were unavailable in the language of their preference. Nearly all aspects of the online teaching were challenging and required some form of support. These include the using the digital platforms, conducting online discussions with students, establishing relationships, and availability of adequate digital resources. A clear need that emerged was to make adequate materials available in an online mode as well as specific support with regard to adapting to the online mode of teaching and interactions. Teachers categorically expressed the need for professional development and training in these areas for a minimum of a few weeks. It is heartening to note that despite all the limitations of adequate resources, teachers did their best to employ strategies to reach out to and engage students through the online mode of learning.

PART 8

Support for Teachers in Their Online/Remote Mode of Work

Drawing from the qualitative interviews, this section explores the views of teachers and union members regarding the sources of support during the pandemic. During the COVID-19 pandemic teachers were required to keep pace with the challenging demands of the new modes of teaching and learning, and they struggled to carry out their duties on a regular basis. There were a variety of challenges that teachers faced, such as job losses, pay cuts, and struggles with health care and professional development. Across the region, teachers reported reaching out to school administrators regarding salary issues and nature of work and local government bodies for sanction of internet allowance and discounts for purchase of digital devices. They took to the media to raise issues of job loss and poor working conditions. Participants from Australia, Indonesia, Nepal, India, and Malaysia said they found the biggest support among colleagues who were experiencing similar hardships. Teachers from Australia, Sri Lanka, Nepal, and India relied on family members to acquire digital skills and support during online teaching. There was also support at the level of school in countries like Japan, Australia, and Indonesia.

For many, being a union member proved to be advantageous on multiple levels. Teachers shared instances of support from the unions

on matters ranging from health emergencies to professional and legal support. Being a union member provided an invaluable network that teachers could rely on for help during the pandemic, taking up a range of issues on behalf of teachers: salary-related issues (India), curriculum changes for teacher's education (India), curriculum reduction for students (Australia, Indonesia), for parent-teacher meetings to be conducted in the online mode (Fiji), loan availability for teachers (Fiji), non-teaching days (Australia), training support (Australia), and internet budgets (Indonesia, Malaysia, and the Philippines).

All the interviewees said being a part of a union allowed them to have a strong organised presence and to collectively raise issues with concerned authorities. The union could advocate for teachers' rights and collectively bargain for and negotiate with employers and concerned departments. Being a union member had protected teachers from job loss and made provisions for legal support available. For instance, a teacher from Nepal said being part of the union allowed them to raise their voice collectively and systematically against the layoff of teachers at the beginning of the pandemic. Teachers shared that their union was able to protect the rights of the teachers by strategising and negotiating with local and national-level bodies.

Access to professional development opportunities was another advantage of being a union member, according to teachers from Sri Lanka, Fiji, Nepal, and Indonesia. As a union member, a teacher from Indonesia could access webinars that addressed a range of professional issues as well as those related to personal wellbeing. Training sessions were conducted directly by unions in Nepal and Sri Lanka. In Sri Lanka, they even organised a session on starting up business enterprises to support teachers who faced job losses during the pandemic.

There was a sense of belonging in being part of a union, according to teachers from Indonesia, Nepal, and India. This was particularly relevant at a time of crisis, and knowing colleagues who were dealing with similar kinds of issues and situations also helped. It allowed teachers to share their experiences and the challenges they faced, as well as seek solutions and mobilise resources. Being union members connected them with colleagues from other schools from different parts of the country and made them aware how other teachers were coping with the challenges of online teaching. This gave them a sense of connectedness with a network of people who they could reach out to when needed.

PART 9

Summary and Conclusions

This study provides a comprehensive overview of the experiences of workers in the education sector of teaching and learning in the online or remote mode at the time of the pandemic in the Asia-Pacific region. It is based on the analysis of 1,574 survey responses from respondents in 22 countries and 16 interviews with 7 teachers and 9 union staff members from 9 countries in the region. The largest number of responses to the survey came from South Asia (44.1%), followed by North Asia (23.4%), Southeast Asia (19.4%), and the Pacific (12.9%). In terms of countries, the highest responses were from India (603), followed by Japan (257), the Philippines (207), and Australia (146). In terms of gender, there was a slightly higher percentage of males (52.3) than females (46%), while a large majority were in the middle age groups of 36-45 (34.2%) and 46-55 (29%). A large majority were employed in government institutions (83.7%) in regular full-time positions (83.9%). About 59% worked in primary education, followed by about 25% in secondary education. A summary of the findings is presented here under the key objectives identified at the outset of this report.

1. Impact of the pandemic and school closures on employment and working conditions in the education sector

The outbreak of the pandemic had a far-reaching impact on the region in the form of large-scale school closures that forced the majority of schools to close and function in an online or remote mode. A large majority of respondents (76.9%) noted school closures in their respective geographies at the time of the pandemic. Even in the two cases in which the respondents said their schools did not close, i.e., in Southeast Asia (44.6%) and South Asia (26.1%), school premises were used for community outreach services for midday meals or community health provisioning. Even if a large majority of the respondents were employed in government institutions (83.7%) and in regular, full-time positions (83.9%), there was a 2.8% decrease in regular full-time employment in the period of the pandemic. Also, about 16% reported a change in the terms and conditions of their employment. For nearly half the respondents (49.6%), work had shifted entirely to an online mode. This percentage goes up to 70.4% when including those whose primary mode of work engagement became online or a combination of online and remote work. Nearly a fourth (23.7%) said their workload increased.

Nearly a fourth of the respondents (23.2%) said they were worried about losing their jobs, which corresponds with the proportion of those that held contractual positions, while almost half (46.7%) said they were stressed about the future of their career. These are clear indications of heightened anxiety related to job security. Many participants in the qualitative interviews also expressed concerns over pay cuts as well as job losses in the future due to digitisation.

Even as the workforce tried to cope with the drastic shift in the mode of work, 21.8% said there was some form of reduction in their compensation, a clear cause of economic distress. After all, many reported increased expenses due to COVID-related preventive measures (25.4%), increased medical expenses (12.5%), and economic stress related to a reduction in salary or even job losses in the family (9.5%). In particular, interview participants from South Asia corroborated these survey trends with reports of fellow teachers and colleagues experiencing economic difficulties. Less than half of the respondents said their institutions provided them with devices needed for work. A

majority (54.6%) had even spent out of their pocket on such devices and materials needed for work and were not reimbursed. These included smartphones, laptops, and internet devices in about 15-17% of cases. In their interviews, some of the teachers and union staff from the Philippines reported that they were denied full compensation in the form of hazard pay that were due them. Most interviewees stressed the need for comprehensive healthcare benefits for teachers, particularly in view of the impending reopening of schools in their respective contexts.

2. Shift to online or remote mode of teaching and experiences and concerns about quality of teaching and wellbeing

The school closures and abrupt shift to the online/remote mode of teaching had impacted every aspect of work, from the content and duration to its perceived quality. This period was marked by uncertainty as reflected in the respondents' concerns about job security, increases in their workload, and decline in the quality of their work. Comparing the respondents' reports in terms of the hours and nature of their work before and at the time of the pandemic revealed interesting shifts. Before the pandemic, majority of the respondents (55.1%) had worked 8-10 hours a day, while 28.8% worked less than 8 hours. This distribution shifted after the pandemic, with 40.5% reporting an average of under 8 hours of work, while the percentage of respondents that reported over 10 hours of work increased from 16.1% before the pandemic to 25.5% during the pandemic, a trend that continued to the present time (25.7%). There was also a perceptible shift in terms of their use of digital devices for work before and during the pandemic. While a large majority of respondents had spent less than 8 hours on digital devices before the pandemic, only about 50% remained in this category after the pandemic and up until the time of the survey. Similarly, the percentage of respondents who reported spending 8-10 hours had increased by 16.7%, while those who spent over 10 hours had increased by 15.1%. These trends continued up until the time of this survey, or after the lockdown had ended in several locations. Interviewees shared their discontent over the intensification of their work, the lack of distinction between work and personal time, and the lack of recognition of the changed working conditions.

The respondents' levels of satisfaction with the nature and content of their work also showed a bleak picture. 42.7% of the respondents felt they were not able to work efficiently during the pandemic, and 32.1% perceived a decline in their own quality of work. Interviewees expressed concern over the shallow quality of teaching and poor student learning in the online mode. For many (32.1%), concerns about their job security were accompanied by a perception of decline in their own quality of work. However, asked which aspect of their work they were most concerned about, many respondents identified the lack of interactions with co-workers or students (23.8%), followed by increased workload for 16% and a change in nature of work for 15%.

While the mode of teaching-learning was online, the resources that came to be most commonly used were still conventional ones, foremost textbooks (28%). Even so, many teachers took the initiative to create online resources on their own (27.7%). Lastly, with respect to their physical and emotional wellbeing, respondents said their personal health and safety was their top concern (28.1%) followed by concerns about their student learning (27.5%) and emotional wellbeing (14.5%). There were fears over excessive screen time for themselves and their students, and how the lack of in-person interactions was making students unempathetic. For teachers, the lack of engagement and interactions with students was a major concern and many looked forward to the reopening of schools.

3. Extent of technological permeation in schooling, access to digital devices, and competencies in ICT

As noted above, for over 70% of the respondents, work shifted to the online mode entirely or in part, which presumes a high level of accessibility to digital devices. However, data from the survey reveals large gaps in terms of their access to devices in the region and serious ones for specific subregions. Only about 43% of all respondents had laptops or personal computers that they could use for their work, while most others relied on smartphones to conduct their work (33.7%). The subregional disparity in terms of such access was even more starkly evident. South Asia was among the lowest (12.9%) in availability of personal computers and laptops, and where the most accessed devices were

smartphones (36.9%). This suggests a suboptimal, stressful work environment for a large percentage of the workforce and a poor quality of engagement with the teaching-learning process for teachers. This intra-regional digital divide that leads to poor working conditions in the digital environment was substantiated by the experiences of interview participants. Teachers interviewed from South Asian countries, in particular, noted a sharp digital divide among teachers and hard-to-reach students, leading to disparities in learning. On the other hand, a few interviewees from advanced countries such as Japan and Australia said the online mode offered new opportunities to engage with new modes of teaching and learning. A few others noted the positive aspects of online teaching-learning as well.

Subregional disparities were equally evident with respect to the provisioning of devices for work by institutions. Most of the respondents from North Asia and the Pacific (69.3% and 58.3%, respectively) received devices needed for work from their institutions. Such provisioning was lowest for South Asia (27.4%), followed by Southeast Asia (36.2%). Low access to digital devices notwithstanding, the frequency of use of these devices and online modes of engagement for work increased considerably during the pandemic: by 4.5 times in the case of video contact, 2.7 times in the case of learning management systems, and 1.8 times for digital learning software across the board. Conversely, the average competence of respondents with various types of digital technologies was at the lower end. A majority (43.5%) ranked themselves as advanced beginners or novices in digital skills. Even in the case of laptops, the device they most needed for work, 41.5% ranked themselves as advanced beginners or novices. Inadequate access to devices and the limited skills necessary for their use were accompanied by lack of internet access, which was described as highly challenging by 31.9% and somewhat challenging by 48.5%.

4. Professional development opportunities for teachers and concerns about working conditions and the future of work

Findings from the survey reveal clear gaps in the formal avenues of professional support that teachers could avail. 55% of the respondents said they availed of professional development opportunities in

the use of digital technologies, while 37.4% had not received any such training. Professional development opportunities from their institutions were reported in 27.8% cases, followed by government departments (21.2%) and unions (12.2%). For a majority, lack of professional development opportunities was a challenge (highly challenging for 24.9% and somewhat challenging for 55.7%). Given the relatively low level of self-reported competence, learning on their own, with some help from others, was the most prevalent mode of learning to use digital technology for a large majority (67.6%). This is a clear indication of lacunae in the provision of systematic training and professional development in the use of digital technologies for the workforce in the sector. Respondents with direct experience of teaching in the online mode further shared that their sources of professional support were through individual efforts by reaching out to colleagues (30%) or their institution (21%) followed by unions (20.1%) and professional groups (14.3%). Formal avenues for professional development emerge as a high priority for nearly all respondents, with variations in the distribution of areas of priority. For a majority (53.9%), teaching-learning with respect to managing and orchestrating digital technologies was a high priority. Only 6-8% of respondents chose any of the six areas of professional development as low priority or not a priority.

An overwhelming majority (88.4%) believed that the use of digital technologies would continue into the future of work. However, only 25.4% of respondents felt confident about being well prepared for this future. Those who were 'not prepared for the future of work' were concerned about increased workload, lack of interactions, and change in the nature and content of work. It is notable that many among those who ranked themselves as a novice with regard to specific digital technologies also felt that they were 'not prepared' or 'somewhat prepared' for future changes of work. Among the requirements for being better equipped for the future of work, the three aspects that emerged are professional knowledge, technical support, and access to ICT devices.

Interview participants were also unanimous in their belief that digital and online modes of teaching were here to stay, and they emphasised the need for teachers to be prepared for the changes in the future of work. At the same time, they were emphatic that technology could not replace teachers. In some contexts, such as India, the appointment of teachers in contractual positions with lower pay was already a

matter of concern. Interviewees expressed fears that the appointment of under-qualified teachers, pay cuts, and an increase in non-teaching responsibilities may increase further. They maintained the urgent need to strengthen institutional support for teachers to develop their skills as well as provide them with devices and guarantee internet access. They stressed the need for teachers to be allotted time for preparation for teaching and professional collaboration.

5. Support for teachers and education personnel with regard to online/remote mode of work

The sudden shift to an online or remote mode of teaching had resulted in undue stress on the providers, particularly schoolteachers for whom ICT was a completely new and unfamiliar space. The suddenness of this shift meant that most of the teachers had to teach themselves how to use the devices and digital applications and quickly respond to the demands of the changed mode of work. As noted above, there was uneven support with respect to the provisioning of devices, online and other materials needed for work, or technical support in their work. In many cases, technical support was unavailable, which prompted many to individually reach out to colleagues (38%), institute administrators and leaders (21%), and union staff (20.2%) for support.

Interviewees mentioned that their institutions, departments, and unions did offer training programmes, but that not all of them had been effective. Most of the interviewees mentioned the importance of peer support in learning to use digital tools effectively. This reinforces the importance of recognising the informal mechanisms of support networks and lending support to these in a more systematic manner. Interview participants were unanimous in their view of the support of their unions in coping with multiple challenges at the time of the pandemic. Their collective bargaining and advocacy helped garner support and find remedies for difficult circumstances.

Conclusions and recommendations

The study provides clear evidence of major changes in the working conditions in the education sector due to school closures during the pandemic. The abrupt shift to an online and remote mode of teaching and learning caught a majority of the workforce unawares. Many faced job losses and had taken pay cuts, which posed undue economic stress. This was at a time when many were already under stress due to physical and mental health issues. On the work front, the shift to the online mode was predicated on widespread accessibility to digital technologies that was not the case. Only 43.2% had these devices in the entire region, and the figure was even lower in South Asia at 27%. There is a severe lack of provisioning of devices by institutions; as a result, smartphones became the most used device for work. Nearly 50% of the respondents spent 8-10 hours or more on their digital device, causing stress due to suboptimal working conditions. Nonetheless, they faced these challenges of increased workload and made valiant efforts to reach out to their students in hard-to-reach locations.

Respondents shared how they spent ever-increasing hours on their digital devices but still felt unhappy about the quality of their own work. Most had taught themselves to use the devices and tools needed within a short period, as opportunities for training were unavailable for many (37%). About 42% believed themselves to be less than competent in using the device most needed for their work, namely laptops and computers. All these factors contributed to their sense of unpreparedness for the future of work in the sector. Over 88% believed that digital technologies were here to stay, but just one-fourth believed themselves to be well prepared for these changes. There is a clear need for access to devices, technical support with work, and professional development in knowledge and skills required for work. Through the pandemic, for many, it was the peer community and affiliation to their unions that provided some comfort in confronting their personal and professional challenges.

The shift towards digital, online modes of teaching-learning is undeniable and in all likelihood will continue into the future. At the same time, there are severe shortcomings in terms of access to devices, training, and systematic, institutional support for the workforce in the sector. Based on the findings, we put forth the following recommendations for policy and programmatic action.

1 ACCESS TO DIGITAL DEVICES FOR WORK

The severe shortages in access to devices for teachers require urgent attention. Education sector workers must be provided requisite devices for their work by their institutions along with technical support regarding their use.

2 BETTER PAY AND HEALTH INSURANCE

Teachers in precarious terms of employment must be adequately compensated for their time and work. All teachers must receive material support for internet access and the online and offline materials required for work. Many countries do not extend health insurance to teachers, which must be remedied immediately so they can safely return to their places of work.

3 PROFESSIONAL DEVELOPMENT IN DIGITAL TECHNOLOGY

To help them prepare for the future of work, teachers should have access to professional development initiatives based on their current needs. This includes changes in the teacher preparation curricula to include meaningful ICT integration.

4 RECOGNITION OF TEACHER COMMUNITIES

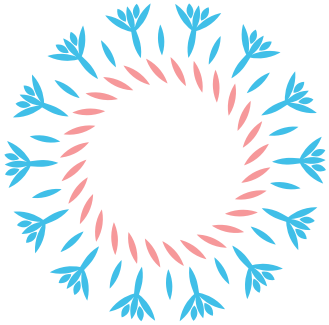
Teachers have relied heavily on their peer community for support with regard to learning to teach in such an unfamiliar digital environment. Their peers have been of great support and, in many cases, their support are even more meaningful than conventional training and workshops. These existing communities of practice need to be formalised, and such peer groups and networks further strengthened and supported.

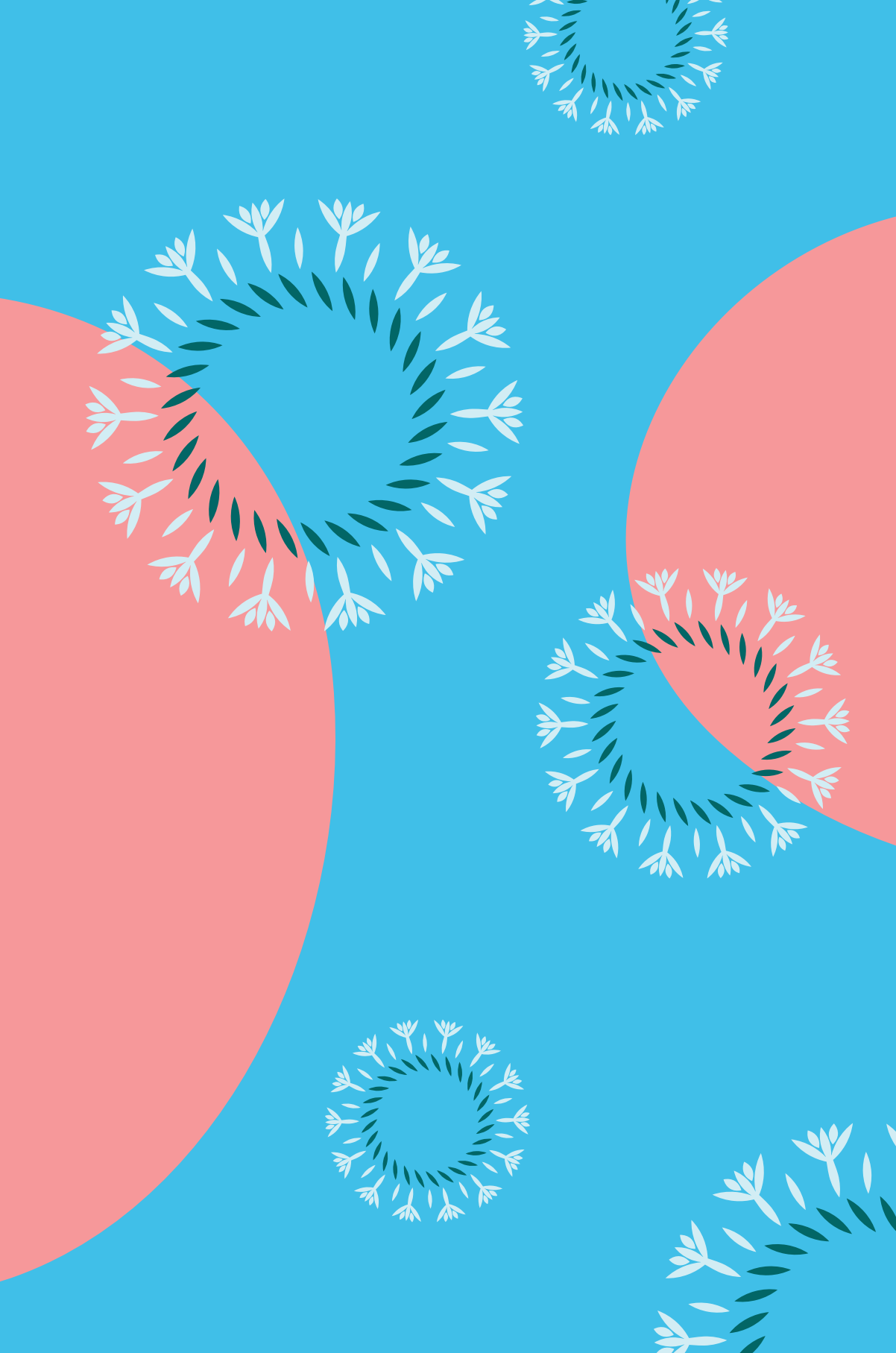
5 RECOGNITION FOR TEACHERS' WORK

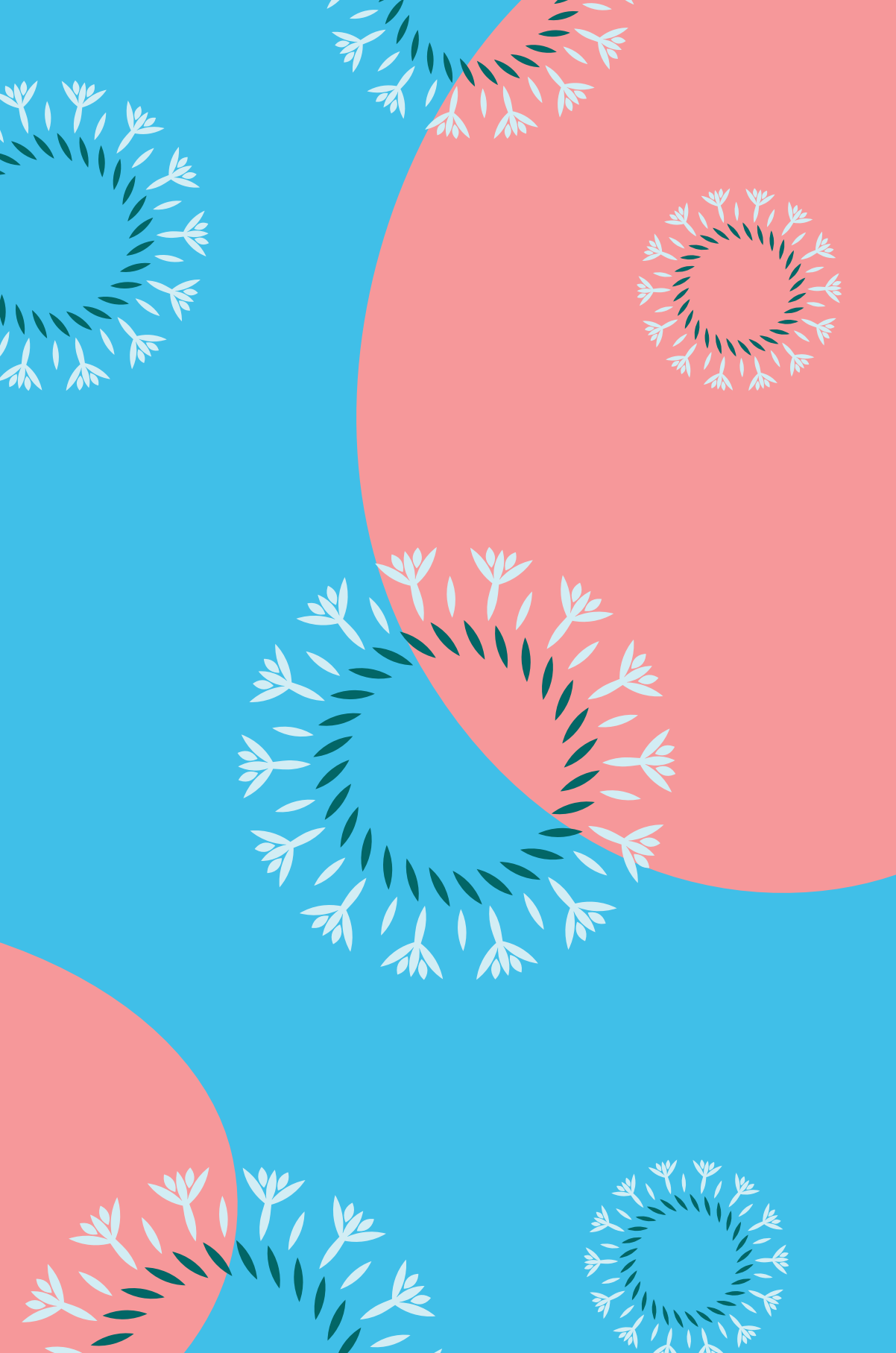
Teachers have been valiantly working through the pandemic, doing complex work, for many at great personal costs, and their efforts need wider, systematic acknowledgement to accord the profession the recognition it deserves. This means the need to provide them better working conditions, which will have a long-term impact in encouraging teachers to stay on in the profession and future generations to take up the profession.

6 INVOLVEMENT OF TEACHERS AND THEIR UNIONS IN SOCIAL AND POLICY DIALOGUE

Teachers are on the front line of the education system and thus have clear sight of the community, students, and their issues and needs. Teachers and their representatives must be included in policy and programme development and decision-making as the education sector takes on the challenges of a post-pandemic world.







Impact of the COVID-19 Pandemic on Education and Teaching in Asia-Pacific

Future of Work in Education

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Published by Education International
Asia-Pacific Regional Office
with technical and financial support by
the ILO Regional Office for Asia and the Pacific
November 2021

Cover design: Karl Castro