The Impact of Remote Learning on Students with Disability during the COVID-19 Pandemic in Victoria

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Executive summary

Significant challenges for school systems around the world rapidly came into focus as the global COVID-19 pandemic materialised in early 2020. The state of Victoria, Australia, particularly metropolitan Melbourne experienced the longest lockdown in the world during the COVID-19 pandemic. This longitudinal research project explored the lived experiences of remote learning for students with disability and their families in Victoria during this period of disruption between 2020 and 2021.

Victorian families who self-identified as having students with disability in a national survey conducted in 2019 by Children and Young People with Disabilities Australia (CYDA) were invited to participate in longitudinal qualitative interviews. Twelve families of students with disability attending mainstream and special schools in metropolitan Melbourne participated in this project. Initial interviews took place in April 2020 at the commencement of remote learning. Subsequent interviews were conducted during remote learning in July 2020, and again just prior to and during remote learning in May 2021. Using multiple interviews with the same group of participants allowed the researchers to investigate how experiences and perceptions changed in real-time as students, families, schools, and policy evolved over subsequent transitions to and from remote learning.

Experiences of students and their families were influenced by four main factors:

1) **Communication about changing arrangements between schools and families was challenging, with students and families frustrated by the limited formal (school level) and loss of informal engagement (with teachers). Persistent communication barriers around eligibility to access onsite learning meant that many students with disability who met the criteria were not supported to attend in person.**

2) **Supports and accommodations provided to facilitate remote learning were ad hoc. Insufficient resourcing to support individualised learning placed increased pressure on families to fill significant gaps.**

3) **Selection and use of digital technologies was diverse. Online platforms were not without their challenges, with some struggling to navigate systems. Some families also expressed disappointment that educators' low expectations of the capabilities of students with disability to engage with technology stymied opportunities for online remote learning.**

4) **Access to and use of NDIS funding during the pandemic and remote learning remained a complex but essential source of support for students and families, particularly given disruption to previously relied upon structures and therapies provided through schools and loss of informal supports.**

These key factors presented several challenges and some unexpected opportunities for students and families participating in this study. For many students, remote learning was not as effective as face-to-face classroom learning, with families reporting regressions in academic and social skill levels and loss of motivation to engage with learning. Participants highlighted that schooling for students with disability is not only for academic learning but also for their overall development. Families reflected that it was a year lost for learning and development, and this was particularly of concern for students who were in transition phase of either starting or finishing secondary schools. The impact on well-being was similarly profound. The loss of the structure of school and missed social opportunities to be with peers saw increasing levels of stress and anxiety amongst many students.

The impact of remote learning on families was equally concerning. The increased responsibility placed on parents to support learning during the lockdowns, often made managing already stretched caring and work responsibilities that much more challenging, particularly for mothers who generally carried the weight of juggling these responsibilities in constantly changing circumstances. These issues were compounded by financial hardship and the emotional toll on relationships that were often exacerbated by the pandemic.

There were some positive outcomes from the experience of lockdown as well. For some students in this study, the experience increased their ability to learn independently. For others, the ability to participate in learning activities at a distance, via online communication rather than in-person, helped build their confidence around participating in group activities. Remote learning provided a less stressful learning environment than on-campus learning with a greater flexibility around the quality and quantity of schoolwork. For students with restricted mobility or impaired executive functioning, learning from home reduced the physical and psychological fatigue associated with getting ready for school. Access to quiet learning spaces and modified learning activities were reported as contributing to improved mental wellbeing.

This study is unique in documenting real-time experiences of families of students with disability during multiple lockdowns in Victoria that included multiple transitions to and from remote learning. There is now ample evidence to suggest that remote learning during COVID-19 lockdowns has been difficult for all students, yet there have been additional barriers to receiving a quality education and support for the students with disability in this study. It is interesting to note the common themes that emerged in all rounds of interviews highlighting the exacerbation of existing systemic challenges prior to the pandemic. The extended duration of this study suggests there were learnings and adjustments that addressed some of the issues over time but also longer-term impacts of remote learning on the wellbeing and development of students with disability.

While we attempted to reach out to families around Victoria, the cohort of families participated in this study were homogenous being from Melbourne metropolitan areas, relatively well-resourced families, and who were well informed about their children's needs and what supports are available. Further research with a diverse sample including families from regional areas, lower socio-economic background and who are culturally and linguistically diverse is required to confirm generalisability of this study findings.

This research highlights the need for greater preparedness to ensure that students with disability have their needs seen and met in future crises. The experiences of participants in this study bring to attention a collective sense of being a secondary priority for many schools and the Department of Education and Training Victoria. The findings from this study should inform future discussions around evidence-informed responses in emergencies that create the conditions to be academically and socially inclusive of all students. Key to this is improving capacity and resourcing of all teachers to provide quality and individualised teaching to students with disability, including through enhanced expertise to utilise digital technology. Similarly, students with disability and their families need greater support to access and utilise technology, particularly during periods of remote learning. Additional educational investments to support students with disability to catch-up on lost learning, tailored mental health supports for students with disability and their families during and post crises to aid recovery are also required. Clearer information sharing with local partners and agencies providing support through NDIS funding would assist in securing resources for support, enabling families and schools to work together.

Context for this research project

School systems and the communities they served faced significant challenges because of the COVID-19 pandemic globally. While almost all students were affected, research from the initial months of this crisis suggested that those with disability were disproportionately impacted (Dickinson, Smith, Yates, & Bertuol, 2020; Flores, Hinton, & Blanton, 2022; Tlili et al., 2021). This longitudinal research project explored the real-time experiences of remote learning for 12 families of students with disability during the COVID-19 pandemic in Victoria, Australia. This report presents the insights from these students and their families on the impact of this period on academic, social, and emotional outcomes.

While most of the available evidence is on isolated snapshots of the experiences of students with disability, the longer-term effects of remote learning on students' education and wellbeing are only just becoming known. The state of Victoria experienced extensive COVID-19 lockdowns throughout 2020 and 2021 and more days of remote learning within most schools than anywhere else in the world (Boaz, 2021). This unique situation provided an opportunity for researching the longer-term benefits and disadvantages of remote learning arrangements for students with disability. This research project is largely novel in that it interviewed participants at multiple points in time over a period of 14 months between 2020 and 2021. The longitudinal nature of the study allowed the researchers to investigate how real-time experiences and perceptions changed as students, families, schools, and policy evolved over subsequent transitions to and from remote learning.

Despite numerous pieces of legislation and the ratification of international conventions aimed at improving the quality of education for students with disability, there remains significant challenges in the implementation of inclusive education (Poed, Cologon, & Jackson, 2022). Even prior to the COVID-19 pandemic, profound inequalities were evident in the learning and wellbeing outcomes of students with disability compared to their peers without disability (De Bruin, 2019). These findings align with those of the Australian Bureau of Statistics (Australian Bureau of Statistics, 2018) which found significantly reduced learning outcomes, constrained opportunities for participating in social activities, and challenges with accessing appropriate communication supports for students with disability within Australia's education system. A national survey conducted in 2019 by Children and Young People with Disabilities Australia (CYDA) reported many families continued to privately commission additional supports and equipment despite targeted funding and legislative requirements for disability inclusion in mainstream schools (Children and Young People with Disability Australia, 2019). The CYDA survey of parents and caregivers also identified perceived low expectations from teachers and poor communication between school staff and caregivers. Barriers such as these are well-documented and are obstacles to disability inclusive education (Woodcock & Faith, 2021).

Family-school partnerships are crucial to positive student academic, social and emotional outcomes in schools and are associated with health and wellbeing promotion (Department of Education Employment Workplace Relations, 2009; World Health Organization, 2021). These partnerships are particularly critical for students with disability (G. Mann & Gilmore, 2021). For all schools and families, these partnerships transfer significant knowledge about individual students from parents to schools (Warren, Hong, Rubin, & Sychitkokhong, 2009). Through this communication a mutual approach to a student's learning has also been seen to be associated with growth in knowledge and confidence (Topor, Keane, Shelton, & Calkins, 2010). Jeynes (Jeynes, 2018) set out the factors believed to be important for effective family-school partnerships developed from six meta-analyses. These are conceptualised as requiring mutual respect (Jeynes, 2018) identifying that communication must be two-way (Young, Austin, & Growe, 2013) and involving genuine dialogue (Mutch & Collins, 2012). However, globally it has been demonstrated that teachers require further development of the skills, training and administrative support to sufficiently support these partnerships (Thompson, Willemse, Mutton, Burn, & De Bruïne, 2018). Remote learning from home during the pandemic created a further challenge in these communications and partnerships, and families of students with disability were among those particularly affected (Dickinson et al., 2020).

The sudden shift to remote learning in 2020 brought new and unique challenges for students with disability and their families globally (M. Mann, McMillan, Silver, & Stein, 2021). Considering the perspectives and experiences of students with disability and their families can illuminate the experiences of this population, and can raise important questions around the impact of local and state policies on the equitable access to education during a crisis. These shared experiences can begin to inform future policy research and practice in education and public health, particularly during states of emergency that require a rapid transition to remote learning.

Purpose of the study

The aim of this study was to investigate the impact of remote learning for students with disability and their families during the COVID-19 pandemic in Victoria. By exploring the real-time experiences of participants longitudinally, this research project sought to understand the shifts in supports and accommodations being offered to students. The impact of these experiences on the participating families was also examined, including the roles of parents in supporting and advocating for their child during these periods of uncertainty.

Methods

This research used longitudinal qualitative study design. Victorian families who self-identified as having students with disability[1] in a national survey conducted in 2019 by Children and Young People with Disabilities Australia (CYDA) were invited to participate in three rounds of in-depth interviews. Twelve families of students with disability attending mainstream and special schools in metropolitan Melbourne participated in this project. The timeframe of this study spans Victoria's first, second and fourth COVID-19 lockdowns, which took place respectively in March-May 2020, July-October 2020, and May-June 2021 (Figure 1). Initial interviews took place in April 2020 at the commencement of remote learning. Subsequent interviews were conducted during remote learning in July 2020, and again just prior to and during remote learning in May 2021.

Participants were recruited through the CYDA's COVID-19 education survey as well as researchers' existing networks. Out of the 12 families that participated in the study, twelve mothers and 10 students participated in first round interviews, 13 parents (including 11 mothers and two fathers) and nine students participated in second round interviews, and 10 parents (nine mothers and one father) and eight students participated in third round interviews (Table 1). Most participating families (9) had only one school-aged child with disability; two families had two children with disability, and one had three.

First, second and third round interviews were held during Term 2 2020; Term 3 2020; and Term 2 2021 respectively.

Research Method

Victorian families who self-identified having students with disability were invited to participate in a series of interviews conducted via zoom. Most participants were recruited through Children and Young People with Disabilities Australia's (CYDA) membership.

12 families of students with disability in metropolitan Melbourne participated in this project

3 rounds of interviews took place over the course of remote learning in 2020 and 2021

Timeline

16 Mar 2020	14 Apr 2020	20 Jul 2020	2 Aug 2020	12 Feb 2021	27 May 2021
State of Emergency declared in Victoria	Remote learning Round 1 of interviews	Remote learning Round 2 of interviews	Stage 4 restrictions in greater Melbourne	Remote learning	Remote learning Round 3 of interviews

Participant characteristics	Round 1	Round 2	Round 3
Number of families	12	11	9
Students represented	16	15	11
Number of parents and students interviewed			
Mothers	12	11	9
Fathers	-	2	1
Students	10	9	8
School setting			
Mainstream	9	9	7
Specialist	6	5	4
Dual enrolment	1	1	-
School type			
Government schools	11	14	11
Catholic schools	1	-	-
Independent schools	-	1*	-
School level			
Primary	9	8	3
Secondary	7	7	8
One child moved from government to private school in round 2			

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1   We recognise that many in the autistic community prefer to be referred to as having neurological differences. While 'disability' is used as an umbrella term throughout this report, we acknowledge the right of individuals to determine how researchers refer to these differences.

Qualitative data were collected remotely using semi-structured interviews on Zoom. Discussions focused primarily on topics related to students' learning and wellbeing prior to, during and after periods of remote learning, with some time dedicated to discussing wider impacts on the household, or family unit. Findings from the previous rounds were shared with the participants and they were given an opportunity to verify the findings and researchers' interpretation of their previous experiences for member validation during the subsequent rounds of interviews. Transcriptions of interview recordings were entered into the coding software package NVivo for inductive analysis where patterns were identified and coded into broader themes and subthemes. Verbatim quotes are used to present the findings to share the voices of the participants.
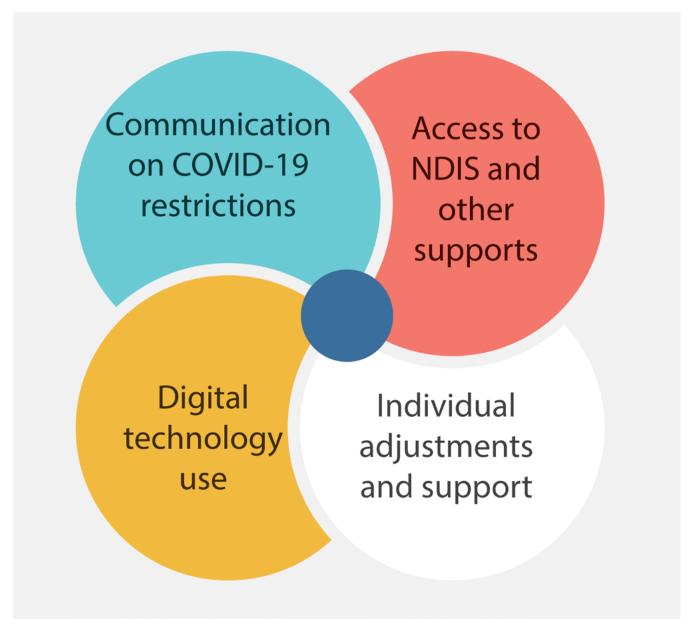

Figure 2. Thematic model

Findings

Findings from interviews with students with disability and their parents are presented below and are grouped according to themes emerging from an inductive analysis of interview manuscripts. We identified that the impacts on the students with disability and their families were influenced by four main factors as shown in Figure 2.

1. Communication on COVID-19 public health restrictions
2. Individual adjustments and support to facilitate learning
3. Digital technologies used for remote learning by students, household members and educators to facilitate learning from home
4. Access to and use of National Disability Insurance Scheme (NDIS) and other supports

This thematic model (Figure 2) was developed based on the main overarching themes emerged from the data. Our understanding of these main influential factors also considers the co-existence of other contributing factors impacting on the education and wellbeing of students during the COVID-19 pandemic. Other factors include (but are not limited to) the disproportionate economic impact of the pandemic on women workforces, gendered norms around the roles and responsibilities of male and female caregivers, the culture of communication between schools, families and governing bodies, and pervasive attitudes towards students with disability within the education system.

Findings surrounding these influencing factors are shared, with the report then detailing the perceived impacts on students and their families. For each of these factors and suggested areas of impact, the participants' perspectives on the lessons they have learned and their proposals for future transitions to remote learning are shared.

Communication on COVID-19 pandemic response

Challenges with communication were a significant factor in the participants' experiences of remote learning. The COVID-19 pandemic response with school closures during 2020 created confusion around who could attend on-site learning at school because the definition of who would qualify as a 'vulnerable' student was unclear. During the first round of interviews in Term 2 of 2020, many parents had expressed confusion around the category of 'vulnerable students' in government messaging. It was unclear which students, according to their individual and family circumstances, were permitted to attend school in-person. Unfortunately for many parents, this lack of clarity continued into subsequent transitions to remote learning. During the second round of interviews in Term 3 of 2020, parents reported continued confusion and frustration as to whether their child was eligible to attend school in-person. Parents were particularly frustrated when they identified that their respective children were vulnerable because they were disadvantaged in their learning without the necessary supports at home that could be offered at school, yet they were still deemed ineligible or refused access by the school.

… everyone is confused about this bit where you have to, as well as having a disability, you have to be vulnerable as well, and therefore it's all down to the interpretation of vulnerability. And everybody knows [my daughter] is vulnerable [for learning and development]. Of course, she needs to be at school.

(Parent of a primary student in a mainstream school, round 2)

They only think about the children who are in physical danger; I suppose, in danger of being abused. … But a student with a disability is just as vulnerable, and nobody had considered it in that way.

(Parent of a primary student in a specialist school, round 2)

According to one parent, their child had overwhelmingly positive impact on learning when she was allowed to attend on-site learning for a couple of days a week during Term 3 of 2020. It also had flow-on benefits for the sibling without a disability with a high level of attention from the parent as they only had one child to supervise.

It's been massive that [my daughter has] been allowed to be at school, because the feedback I've been getting from her aide is that she is… when she's there, she's working well. She's learning, she's doing the work and she's happy. So, the positive this time around is that she's been able to be there. It's massive.

(Parent of a primary student in a mainstream school, round 2)

In third round of interviews during Term 2 of 2021, parents shared experiences with social distancing restrictions at schools and its impact on communication between parents and teachers. The lost opportunity for informal communication at student drop-off and pick-up was particularly challenging for parents of primary school students. Some parents highlighted that previously these informal communication opportunities were helpful, as discussing their child's day allowed the identification of any follow up actions that may be required. Parents also reported challenges in trying to communicate with schools to arrange formal appointments such as Student Support Group (SSG) meetings, particularly when their emails were not responded to by teachers.

> *This school has no way for you to contact the teacher directly. Apart from leaving a message at reception and waiting for them to get around to giving the teacher that message and the teacher getting back to you. You can't just leave a message because you can't really leave a message at reception for what you want to talk to the teacher about. You know what I mean? You want to discuss that with the teacher, not with the receptionist.*
> (Parent of a secondary student in a specialist school, round 3)

Parents highlighted that communication challenges were existing even before the pandemic, and were exacerbated due to COVID-19 restrictions. The reduction in informal communication between students, parents and teachers was raised as an ongoing concern by many parents, particularly as this limited teachers' access to information about students' wellbeing and ability to participate in remote learning activities. Parents also noted that they don't feel part of the school system anymore and that the partnership between schools and families is lost because of the social restrictions and communication challenges.

> *No one has touched base with the parents and said, 'Hey, are your kids coping? How did they go in lockdown? Were there any concerns? Is there anything we need to look out for?' You know, there's none of that. (Parent of a secondary student in a specialist school, round 3)*
> *Parents are not part of the school in the same way anymore, which means that you don't have an easy flow of communication. You're always sort of making appointments for Zoom meetings.*
> (Parent of a primary student in a mainstream school, round 3)

Some students did not appreciate the restrictions around the use of face masks and social distancing measures at school. As this high school student describes below, it was frustrating for him that the rules are inconsistent across different settings at the school. The observed implications of these inconsistencies were that students in this setting were more likely to question and disregard the public health directives from the teaching staff, undermining the effectiveness of the response to a global pandemic.

> *You're sitting in classes, and they're all like so big on like staying 1.5 metres away. And then you go in the playground. Nobody follows it. You think yourself, so what's the point?*
> (Secondary student in a specialist school, round 3)

Individual adjustments and support

For many of the students interviewed, remote learning during the first lockdown was perceived to be quite ad hoc in relation to the adjustments to the curriculum and how it was delivered, as schools had to rapidly shift to online platforms. Participants reported that these adjustments often lacked consideration of the needs of individual students. Most parents were sympathetic that with the sudden circumstances surrounding Victoria's first lockdown, schools and teachers had limited time to modify learning content and lesson plans for remote learning. Whilst parents recognised that some improvements occurred, they also suggested that more could/should have been done to individualise learning and well-being activities in subsequent phases of remote learning. This was not perceived as a new issue, as insufficient individual adjustments were described as pre-dating the COVID-19 pandemic.

Parents reported that students often required individual adjustments within onsite schooling, including modified curriculums and activities, adapted daily timetables or routines, access to accessible formats, individual assistance with learning activities, as well as assistance with self-care. These requirements did not change with the switch to remote learning. Indeed, parents reported that additional adjustments were required for students to be able to engage with remote learning. Yet these adjustments were often not supported or implemented by schools.

> *What's hard is for children like [student's name] engaging over like a zoom meeting; It's just very difficult. And the circumstances have to be perfect in order for her to actually engage with the video, if that makes sense. She's got to be in a good mood, and she's got to be willing to talk and all that sort of stuff. The fact that it's not individualised is tough for her.*
> (Parent of a primary student in a mainstream school, round 2)

Participants commonly described remote learning activities as lacking individual adjustment or instruction for parents on how to adapt for different learning needs. Many parents took it upon themselves to adjust learning activities and routines according to their child's specific needs. Examples cited by participating parents included adjusting workload and timetables, implementing visual schedules and rewards, breaking work into manageable chunks, and adapting activities to the students' interests. Parents of students with intellectual disability expressed frustration at what they saw as teachers' low expectations of their child's learning ability. Some parents felt students were not receiving enough work, and some parents and students commented on work being 'too easy'.

> *The school sent worksheets, again colouring in and some maths sheets and some spelling sheets, which we did. But we got him to watch videos and just do some things that were a little bit more exciting than worksheets.*
> (Parent of a secondary student in a specialist school, round 3)

It has relied on me being her teacher, and I am a teacher so that is ok, but I don't think that's ok for the majority of people….It's not ok for the majority of people whose kids with disabilities don't have teachers for parents. I knew how to modify the work, and how to break a concept down and explain it to her.
(Parent of a primary student in a mainstream school, round 2)

Parents acknowledged that it was harder for teachers to identify and respond to students' individual needs during remote learning, and that there was greater success when teachers and education support staff were familiar with their child's needs.

She's got the same humanities teacher and English teacher. And I think they've incorporated things that they've learned [from teaching her] last year. Particularly her humanities teacher. He's really got quite a good handle, I think, on modifying stuff for her and more scaffolding her doing things practically.
(Parent of a secondary student in a mainstream school, round 3)

One family recalled the amount of effort the mother and the older sibling invested in modifying learning activities and negotiating with teachers, which had positive outcomes for the student's learning. However, they also questioned the need for such input from their end when they felt it should be the school's responsibility.

I think because of the work, [sibling] and I've put in with [student's name], and in initiating and maintaining communication with school, we've managed to make something workable and positive happen. But if we hadn't done that, I don't think she'd be getting any education at all… I've been grateful to have the insight to see what's actually happening and then have the opportunity to try and have some impact on that. But it shouldn't be like that should it?
(Parent of a secondary student in a mainstream school, round 2)

Parents highlighted they had to advocate even before the pandemic to ensure their children's individual needs were met at school, and appropriate adjustments put in place. Multiple parents highlighted that they experienced a continuation of this trend as their children rapidly transitioned to remote learning. During these periods of transition, parents described numerous instances of schools failing to recognise that instructions and activities needed to be adapted, teaching staff implementing inappropriate adjustments, being advised that teachers do not have time to provide individual adjustments, and advice and strategies provided by specialists not being implemented. One parent described sensing that schools overall only have capacity to cater for the 'average' student, with this being even more evident during a crisis.

Schools are really only set up for the average student, and yet they are supposed to be diverse and inclusive, and I think they are, but they don't really display it at a time like this when extra needs may need to be accommodated.
(Parent of a secondary student in a mainstream school, round 1)

Existing formal mechanisms such as Student Support Groups (SSGs) and Individual Learning Plans (ILPs), designed to coordinate and facilitate support for individual students, were described as having not been fully utilised during remote learning—this was also reported as a pre-pandemic issue.

Schools really like to push it [SSGs] off to the teachers and say, 'Look, it doesn't sound like you need that many modifications, you can just discuss that directly with the teacher', rather than having it formally on the ILP.
(Parent of a primary student in a mainstream school, round 2)

Participants reported SSGs as being held inconsistently during periods of remote learning, with most parents reporting during the first two rounds of interviews that their child's ILPs had not been reviewed. One parent noted that if ILPs had been reviewed during the early stages of the shift to remote learning, this may have provided a key opportunity to identify potential challenges and design and implement individualised strategies for remote learning.

I would say that if the school had done the things it needed to for him in the first place, so had an individual learning plan and shared that with me and we had a support group meeting when things shut down, I think that would have been a good start.
(Parent of a primary student in a specialist school, round 1)

This quote from a parent reflects a broader perception of a sense of connection between themselves and the school was lost in the transition to online SSG meetings. While some parents reported not having any opportunities to attend these legislated meetings, some parents who did have the opportunity felt the process had been compromised by the meetings being conducted remotely due to COVID-19 restrictions. As a primary and legally required channel of communication between the families and the school, changes to the SSG process appeared to negatively impact on the perceptions many parents held of their respective schools' willingness to communicate with them.

Digital technology use for remote learning

Digital technologies played a key role in the facilitation of remote learning, with a range of hardware and software being employed by schools and caregivers to varying degrees of success. In addition to pre-pandemic means of online communication such as email, schools utilised different online communication platforms and learning management systems (LMSs) to facilitate remote learning activities and additional learning supports. Families reported using a range of web-based applications, digital tools and software including LMSs such as Compass, Google Classroom, Seesaw, Edmodo and ClassDojo, as well as general productivity software suites, such as Google Education and Microsoft Office. Video conferencing software (VCS) such as WebEx, Zoom, Google Meet and Microsoft Teams were reported for video communication by schools.

Compared to the first round of remote learning, families reported increased frequency and efficiency in the use of digital technologies by schools for remote learning activities and communication in subsequent rounds. The use of digital technologies varied according to different schools and individual teaching methods. Students' experiences of using digital technologies also varied, with secondary school students demonstrating a higher degree of familiarity and confidence participating in online learning activities.

> *Well, one good thing that they've started doing is they've started attaching videos to some of these activities and the video, they will describe, you know, 'This is what I want you to do'. …this is much more engaging for her than a classroom.*
> (Parent of a primary student in a mainstream school, round 1)

Experiences of using LMSs were impacted by the user interface design, with many parents describing these as difficult for students to use. One parent described the usability of Compass as 'clunky' and questioned whether any student, regardless of disability, could use it without difficulty. LMSs such as Google Classroom, which enable access to external tools and applications within the user interface, were described by parents as complicated and difficult for students with disability to use independently.

> *It's hard for the kids to be trying to read something on one website as they are trying to type something into a Google document.*
> (Parent of a primary student in a mainstream school, round 1)

All schools used VCS as a means of engaging students in face-to-face learning and virtual classroom activities. However, perceptions and experiences of using this technology were mixed. Familiarity with and understanding how to use VCSs was a factor in how students engaged in the sessions. It was particularly challenging for primary school students who did not use digital technology for school but used primarily for non-education activities. It was often challenging, confusing, or frustrating for some students when they were required to use devices for educational purposes, and took some time for these students to adapt to new methods for learning with parental support.

> *So, at first, we weren't sure how he was going to react to speaking to someone on the computer. He thought at first, he was watching a video clip and he kept trying to move you know, fast forward and rewind. And…he did freak out a few times and close my laptop and run out of the room. He slowly became more comfortable [following strategies implemented by his ABA therapist].*
> (Parent of a primary student in a specialist school, round 1)

Challenges with the use of and engaging in video conferencing were also reported due to not making adjustments for students' functioning needs. One student with low vision was reported as having difficulties seeing their teacher on screen due to poor lighting and contrast on the screen.

> *He also has a visual impairment so that also…for example when we did the morning circle, they didn't ever think about that, and I was having to say to the teacher 'can you turn the light on in your room because he can't see you'.*
> (Parent of a primary student in a specialist school, round 1)

Some families agreed that regular classroom meetings, which were more commonly offered from the second lockdown, had a positive impact on students due to increased level of interaction with educators and peers compared to the first lockdown. These briefing sessions varied from school to school and were generally offered in the morning.

> *They've set it up differently this time. … they've made it so that they have morning circle every morning at 9:30[am] and that's definitely made it better for [my daughter].*
> (Parent of a secondary student in a specialist school, round 2)

For families with multiple children in school, however, difficulties engaging with live group or whole-class activities online was compounded by the concurrent scheduling of video conferencing sessions in siblings' classes (typically during the morning), as this created an environment with more distractions.

Not all schools used digital tools as their primary mode of teaching and learning. According to the parent of a secondary student who attends a specialist development school, the adjustment to remote learning was made more difficult due to an overreliance on analogue teaching methods within the school that predated the COVID-19 pandemic.

> *So, they have a Bring Your Own Device program… but there's really not much happening technologically. … And I just think they're perhaps a little bit trapped in the 20th Century.*
> (Secondary student in a specialist school, round 2)

Another parent whose child also attends a specialist development school explained how, while some online classes had been offered for students doing a Victorian Certificate of Applied Learning (VCAL), remote learning activities were not being offered for other students at the school.

> *[A senior teacher] said, 'What do you want?' I said, 'We would like some [classes] online.' And she flagged that this class weren't online appropriate… I think they were doing some online [classes] for the VCAL kids.*
> (Parent of a secondary student in a specialist school, round 2)

For these parents, there was a sense that some specialist schools were resistant towards delivering learning activities in online formats which they interpreted as an assumption by the school leadership and teachers that students with disability such as their children would encounter insurmountable challenges using digital technologies.

Despite challenges using digital technology being reported as the norm, some positive experiences using digital technology were also noted. The ability to receive notifications on LMSs about deadlines for learning activities was considered helpful for completing and submitting work on time. One parent said using Edmodo and ClassDojo had increased their children's ability to learn independently as the user interface was considered easy to navigate and minimal support was needed for their primary school student. Digital tools such as Education Perfect and Microsoft Immersive Reader with text-to-speech functionalities, including speed control, conferred greater task independence for students with reading difficulties. One student also benefited from their parent having arranged for educational support workers to make audio recordings of school reading material, which they could then listen to as the student prefers listening to audiobooks.

> *I just approached the teacher aides and said, they are going to be doing this stuff in English, I can't find an audible version. I could record it, but she's already listening to my voice. Are you able to help her out? And could that be part of your work with her? Preparing that for her. That's gone well so far.*
>
> (Parent of a secondary student in a mainstream school, round 1)

Most families expressed a preference for communicating with teachers via face-to-face or verbal interactions, which could be facilitated by VCS. For one student, however, direct messaging was preferred to verbal interactions. Another parent stated their child could have benefited from receiving audio recorded messages from their teacher, however this did not occur.

> *I think he's more readily able to ask questions. I know in the classroom, he would probably feel more self-conscious. Whereas [now] he might use an email, or he might use a chat facility to advise the teacher that, you know, maybe he needs further clarification.*
>
> (Parent of a secondary student in a mainstream school, round 2)

Several teaching and learning strategies were employed by educators and carers to help facilitate students' learning from home when using digital technology. Some of these were strategies continued or adapted from physical classroom settings, such as taking additional time to repeat exercises involving problem solving. Some parents said rehearsing helped students with their emotional regulation when they were expected to demonstrate knowledge during live classes. The ability to participate in learning activities 'at a distance', via online communication rather than in-person, helped build some students' confidence around participating in group activities.

Access to and use of NDIS and non-education supports

While not a new phenomenon for many parents, the complex boundaries between when NDIS supports could and could not be utilised for education became even more vexed during remote learning. In the early stages of remote learning, families of students with disability reported that they resorted to using NDIS funding to fill the gaps left by a sudden lack of school-based education supports and other formal and informal supports such as speech pathology and occupational therapy sessions during lockdowns. Participants reported using their child's NDIS funding to support their learning from home as well as support daily living activities within the household. NDIS funding was also used to purchase technology for accessing online learning and therapies as well as pay for additional disability support worker hours. Parents felt that without additional support worker hours they would not have coped.

> *I would have had to stop work. My parents are both health compromised so they couldn't really come over and help.*
>
> (Parent of a secondary student in a specialist school, round 1)

Initially there was much confusion as to how NDIS funds could be used, particularly in relation to supporting education-related needs, usually deemed the responsibility of education departments. Despite announcements that funding would be extended to encompass additional support needs for NDIS participants, confusion remained as to whether this included education related activities. This confusion created significant anxiety for families who were concerned about the long-term impact on their child's NDIS funding. For instance, if they were found to be misusing funds for education support, if they would have a shortfall in their child's funding, or if they accessed supports not budgeted for in their NDIS plan. This was particularly a challenge for the families who dealt with NDIS planners based outside of Victoria.

> *They [NDIS planners] were not up with the fact that the situation in each state was different. It was kind of like, 'Oh, well, where I am on my phone line here the kids are going to school.' And it's like, 'No, we're in Victoria. That's not what's happening here.'*
>
> (Parent of a primary student in a mainstream school, round 3)

Despite the increased flexibility in utilising NDIS funds, many encountered difficulties finding support workers to fill additional hours. Adding to this were challenges in engaging new workers who were not familiar with their child's needs, in many cases, for children who function best with familiarity and routine. Accessing support workers became particularly challenging during the second lockdown when restrictions were introduced, limiting the ability of disability support workers to work across multiple jobs or agencies. Some families opted to reduce support worker hours during this period due to perceived risk of COVID-19 transmission (vaccines were not yet available) despite being worried about their support worker potentially being unavailable later when they wished to reinstate them. Some reported access to support workers to be an ongoing issue even once lockdowns lifted, especially for personal care, and felt this was more of an issue than before the pandemic.

I don't know if [support workers] are being a bit more discerning now that COVID is there as well, and they're not doing certain things; they'll do some things and not other things, for example. I don't know if they're being a bit more fussier now, but it's very hard to find properly suitable workers.
(Parent of a secondary student in a mainstream school, round 3)

In the second and third rounds of interviews, parents increasingly identified using funding supports not just for learning and 'coping', but also for facilitating opportunities for their child's social participation and recreation, as well as the continuation of usual therapies.

Lack of access to social and recreational supports was raised increasingly as a concern, with some commenting that these aspects of their child's usual life and support structures were missing and impacting negatively on their health and wellbeing. An increase in the availability of online recreational activities and groups, often NDIS funded, was noted in the second round. This had not been available in the early stages of the pandemic. Student participants, particularly secondary school students, engaged in online activities including singing, dancing, cooking, computer gaming, and art. These activities provided students with disability with stimulation and opportunities for peer interaction, which parents reported was often only minimally available for these students through their school.

The kids were like, 'We can't go without our supports because they will keep us going', and you cut off everything for these children and it's just going to negatively impact them. So yeah, they figured out a way to get it online. All of a sudden Zoom was like a lifeline.
(Parent of a secondary student in a specialist school, round 3)

However, one family identified that they had been able to maintain some face-to-face recreational activities, and that this had been extremely important for their student.

The one positive is, the constant that you [student] kept through remote learning is, you know, you still went to performance training and you still went to your boxing coach, and still went to your football coach.
(Parent of a secondary student in a mainstream school, round 3)

In terms of the continuation of therapy supports remotely through telehealth, there were mixed experiences. Some parents felt this arrangement worked well for their child and they enjoyed the convenience and time saved in not travelling to and from appointments and were considering continuing with remote therapies once restrictions lifted. Some continued with remote therapies throughout restrictions but felt it was less beneficial than face-to-face sessions, particularly without the opportunity to practice skills (e.g., social skills) in real life settings such as at school. Other families discontinued therapies, stating their child was no longer engaging and therefore decided it was of no value. One parent commented that due to negative experiences they would only engage therapists in the future who will provide in-person sessions at home and at school, although ongoing limits on visitors to school was also acknowledged as a challenge.

Impact on students

The four factors reported above presented a number of challenges and some unexpected opportunities for students participating in this study. Not surprisingly, all of the participating students expressed some degree of frustration at the shifting conditions and regulations about when and how their learning would be supported.

Being stuck at home, not being able to go to school, I don't like it; not being able to see my friends, not actually learning anything. I'm not actually getting enough of an education.
(Secondary student in a mainstream school, round 1)

Participants highlighted that schooling for students with disability is not only for academic learning but also for their overall development. When considering the challenges and opportunities resulting from the transitions to remote learning and the broader pandemic, participating students and their families described a number of areas impacted. Key themes of impact were learning, emotional wellbeing, and relationships and social skills.

Impact on learning

While the sentiments expressed by families in the earlier phases of the pandemic were overwhelmingly a sense of 'just getting through', by the time of the Round 3 interviews, their concerns had shifted to the longer-term impacts of remote learning. Remote learning was described as leading to setbacks with learning, with students with disability falling behind peers, and undermining motivation, enjoyment and willingness to engage in school. Parents acknowledged that schools improved their communication around learning activities in the second round of remote learning, and there was greater flexibility to manage students' workloads according to their needs. However, they also found it increasingly difficult for students to engage in learning without the cues associated with being at school or individualised adjustments and support. This was particularly difficult for primary school students, whose parents felt that the students needed more on-on-one support and that a physical classroom environment would be most effective.

[My daughter] is not capable of the mental shift to being home-schooled. She needs to be in school to learn. It's a really, really simple thing for her, so she needs to be at school to learn.
(Parent of a primary student in a mainstream school, round 2)

Getting him to do schoolwork at home was a bit of a challenge. Home is the sanctuary. Home is the place where he goes to relax and have fun.
(Parent of a primary student in a specialist school, round 1)

When students with disability returned to school in Term 4 of 2020, families reported that the main focus by schools was readjusting students back to the school routine and social norms rather than academic learning. While this was acknowledged as an important response to ensure students are supported to recover from the distress experienced during lockdowns and remote learning, some parents felt that their child had effectively lost a year of learning. This was especially concerning for families of students transitioning into and out of secondary school during round 3 of interviews, who were worried about the impact it would have on their child's future learning and employment opportunities. These concerns were exacerbated in the 2021 academic year by the lack of individual adjustments and communication challenges between families and schools due to social distancing measures. Quotes below from different families highlight parents' anxieties and the challenges exacerbated by low expectations of schools on the students' capabilities.

> *Fundamentally, I think the best I can say about last year is that she lost a year. And the worst I can say about it is that she has actually gone backwards, academically….I think it made it a lot more difficult for her to cope with grade six when she missed grade five. But also, in terms with the way that the school was addressing it, and with communication and distancing the parents and all of that, has just meant that when these problems are arising - parents are not part of the school in the same way anymore. I used to feel that we worked as a team, and I don't feel that anymore. It's very hard to sort of disentangle some of that. The way that they have changed the communication and working with parents post-COVID is making it worse…*
> (Parent of a primary student in a mainstream school, round 3)

> *I think mostly just the learning time that he missed out on…. And I don't think a lot has been done since we got back to try and rectify that learning either. I know that there's the tutoring program. But I don't think [student's name] has been placed high on the priority list for that. Because I genuinely believe that no one has high expectations of him. So, they don't they don't prioritise him because they think he has limited capacity.*
> (Parent of a primary student in a specialist school, round 3)

> *We just don't seem to be sort of striving and working up and achieving. And [student's name] has so many really positive attributes that I just don't feel are really being worked out enough. Yeah, we know that once you get out of school, it's all quite complicated and quite, you know, competitive…. and we just both don't feel that he's getting enough input from the school now to give him the best chance when he finishes in 18 months' time… And I think this remote time was really just lost time last year.*
> (Parent of a secondary student in a specialist school, round 3)

Impact on emotional wellbeing

Remote learning also took a significant emotional and psychological toll on students with disability. Adjusting to sudden stay-at-home measures, spending long periods of time indoors, disruptions to familiar daily schedules and weekly routines, and uncertainties around schools reopening, contributed towards feelings of shock, stress, and anxiety. Students with pre-existing high levels of anxiety experienced increased levels of stress and emotional distress. The sudden and unpredictable nature of these changes created challenges for students with difficulties with emotional regulation. For some, this distress and anxiety was sometimes expressed through increased levels of verbal and physical aggression.

> *We learned from our school Principal that our school was pretty much shutting down. I think it was the Tuesday or the Monday before it was shut down on a Wednesday. [Student] did not react well at all. He probably had one of the biggest meltdowns I have ever seen, which included absconding, umm, kicking glass windows, he just did not cope that well at all hearing that school has finished early. Just because he loves it so much, and I guess, he was in a really good routine*
> (Parent of a primary student in a specialist school, round 1)

This emotional impact had a compounding negative impact on students' ability to learn. In some cases, students' psychological distress was so great they were unable to attend online classes, complete assigned schoolwork, or leave the house for daily exercise. Some parents linked emotional outbursts and aggressive behaviour to increased screen time, lack of sleep, lack of opportunities for physical activity and outdoor play, as well as an absence of usual educational supports during lockdowns. One parent also reported the effect on their child's confidence.

> *I think she's lost a certain amount of confidence. But we're working back up and starting to this term, it's starting to reappear a bit more. Last term, it was very challenging. She was quite upset and angry a lot of the time. This term, I'm starting to see a little more confidence appearing.*
> (Parent of a primary student in a mainstream school, round 3)

For some students, however, remote learning provided a less stressful learning environment than on-campus learning. Greater flexibility around the quality and quantity of schoolwork reduced stress among some students. For students with restricted mobility or impaired executive functioning, learning from home reduced the physical and psychological fatigue associated with getting ready for school. Access to quiet learning spaces and modified learning activities were reported as contributing to improved emotional wellbeing.

His mental health really improved… It's still up and down, but, on the whole, it's better than it was. He's more reasonable. He's more able to express himself effectively. [He] doesn't fly off the handle as much. You know, you can reason with him so much more.
(Parent of a secondary student in a mainstream school, round 2)

I think he's more focused and his concentration span is increasing with the quietness of having his own space with his own desk and his own chair.
(Parent of a secondary student in a mainstream school, round 2)

Impact on relationships and social skills

Remote learning also impacted on students' relationships and social skills. Students expressed sadness and frustration at being unable to see their friends during the lockdowns. The prospect of outdoor play and socialising with classmates were common reasons for students wanting to return to school. When students did return to school, increased difficulties in social interactions were commonly reported by parents in the third round of interviews. While some secondary school students reported maintaining connection with friends through online platforms such as social media and gaming, challenges with maintaining friendships and reconnecting with peers was reported by many.

Grade six students in 2020 were reported as experiencing boredom, loss of engagement and enthusiasm for school in general, having been unable to attend planned activities associated with their final year of primary school, with VCE students reporting similar loss of key events. Secondary school students reported a sense of having lost meaningful time with peers and having missed what for them felt like 'an entire year of school'. Parents expressed concerns about the loss of physical activity and the amount of time students spent alone in their rooms.

She has gone from being someone who is happy to have a fair few friends to being someone who doesn't want to know anybody and just wants to be shut in her room all the time. And I know that's not uncommon at 12 going 13 but it's been exacerbated by not having her social skills practiced every day. So, I think that's been a negative outcome.
(Parent of a primary student in a mainstream school, round 3)

One parent of a student starting secondary school in 2022 was concerned about the impact the time away from peers could impact their child's ability to make friends at their new school. However, some parents also reported students' confidence returning after on-campus learning resumed.

Impact on household members

Given the experiences shared by parents in supporting and advocating for their children during remote learning, it is not surprising that the impact of the four factors extended to the household members. Thematic analysis of the interviews identified significant impacts on the mental health of the parents, siblings and other caregivers. This remote learning period also highlighted the maintenance, and in some cases an extension of the gendered norms around care and schooling. Many mothers participating in this study reported making sacrifices to support their child's learning. Finally, it is clear from the interview data that relationships were reconfigured and re-examined because of the need to support a child through the transitions to remote learning. This section of the report delves into these impacts and seeks to provide a voice for those who provided care for students with disability.

Impact on mental health

Findings from the first lockdown identified increased stress levels among parents, often attributed to the mounting pressure on parents to ensure their children remained engaged with remote learning activities while simultaneously juggling personal work commitments. The challenge of balancing teaching, parenting and work responsibilities was made harder by the loss of school-based and other formal supports, and the informal supports that families usually rely on.

I took on all those roles, support worker, therapist full time, or therapy assistant, full-time carer, and some of those roles I already had, but to take them all on at once was definitely a lot… even though I had more time at home, I had less time to do the things I needed to do. So, it definitely created stress as well.
(Parent of a primary student in a specialist school, round 3)

Although parents reported better support with learning activities from school during the second lockdown, remote learning was still stressful physically, emotionally, and financially. Working parents reported having to choose between facilitating and supporting students' learning or completing work-related tasks when there was not enough time to do both.

Either the work gets let go, or [student's name] learning gets let go. They almost often can't happen at the same time.
(Parent of a primary student in a mainstream school, round 2)

Increased care responsibilities and a lack of respite resulting from an absence of regular formal or informal care arrangements, extracurricular activities, and therapies contributed to psychological distress and emotional fatigue among parents. Loss of work-life balance compounded feelings of stress and reduced time for parents' own self-care. While some parents noted remote learning had the effect of reducing anxiety around family members' exposure to COVID-19 (at school), negative impacts on mental health were reported more commonly. Parents described feelings of being frustrated, tired, and trapped.

It's hard to talk about my mental health because I'm not really sure what's internally driven, and what's externally driven, but I guess I would describe it as often as feeling trapped is the main feeling. So yeah, it's definitely impacting on mental health domain for sure.

(Parent of a primary student in a mainstream school, round 2)

Feelings of stress were also attributed to confusion around how to effectively facilitate and support learning activities, particularly for parents without teaching experience. Some parents queried what they believed was an inherent assumption being made by schools and government that students with disability could participate in learning activities and manage their workload independently and without the supervisory supports typically provided in classroom settings.

Neither of these kids with ADHD is able to really work independently, without staring into space, or forgetting what they're doing getting distracted losing their materials, you know, that kind of thing… I've been fully engaged with what I normally do plus actually having to put work pretty much non-stop with both of them until lunchtime. So yeah, it is, it is quite impactful. I think, for kids with disabilities of the kind that where they can't really organize themselves, trying to do is full of school day at home is really impractical.

(Parent of a primary student in a mainstream school, round 2)

Parents recalled having to prompt teachers for clarification and feedback to help their children understand and complete learning activities, and many were worried their children's ability to participate and engage during school rested solely on their shoulders.

Families with multiple children reported challenges with providing care for siblings in the family as they had to focus so much on the student with disability. One family reported realizing their other child without disability needed more attention and support with her learning when her grades dropped, but also acknowledged that it was not feasible to sit with both children when they have simultaneous live sessions happening. As quoted below, another family reported the impact on siblings' emotional health because of distractions and the increased level of stress at home supporting the student with disability.

But the idea of remote learning for [sibling] is something now quite toxic. And I think that the level of stress that we went through trying to get [student name] to deal with learning from a screen, it was it was bad for all of us, really, really bad. I felt a huge sense of doom at the idea of doing that again.

(Parent of a primary student in a mainstream school, round 2)

A parent who self-reported to be a neurodivergent shared the challenges with multi-tasking as they can only focus on one thing at a time. The parent described that having limited flexibility at their work added to the stress and this lack of ability to balance between their work and remote learning support was frustrating.

… for me in particular, it's really hard to focus on anything other than one thing at a time, I guess. Like, I can't mark papers and also helps [student's name] to do her math or her reading… this is just impossible… if any work needs to get done it's one or the other. There's no way to do both at the same time. And so that adds a little frustration [and] another level of stress.

(Parent of a primary student in a mainstream school, round 2)

Families described adopting different ways of coping strategies in addition to seeking professional help such as making a conscious effort to remain calm, maintaining a structure and routine as much as possible, focussing on the positives, and accepting the situation.

For me, it's just trying to knuckle down and do it again. Sort of 'here we go' type thing. But other than that, it's fine. It was more just that first week or two, just tweaking it, getting them into a routine and making sure everyone understands the expectations.

(Parent of a secondary student in a specialist school, round 2)

We just kind of say is that it is what it is… And we can impact each other's lives in positive ways, this is one of them. Well, listen what can we do, I mean, it's pretty shit out there. We've just got to take it as it comes really, don't want to go spiralling into the depths of depression and that's something you can control.

(Parent of a secondary student in a mainstream school, round 2)

Mental health and wellbeing were pertinent themes throughout all three rounds of interviews. While the individual circumstances of each family unit presented their own enablers and barriers to accessing appropriate mental health supports, what was common was a recognition of the scale of the challenges presented by COVID-19.

Gendered norms and expectations

In all three rounds of the interviews, parents identified gendered divisions of labour in the responsibilities around supporting remote learning. Some two-parent families reported that fathers supported students with disability with their remote learning, but in the other families, fathers mostly supported leisure/extracurricular activities such as gardening or other fun activities. For most families, the responsibility of remote learning and managing household activities fell on mothers, even when some of them were working. A couple of mothers described the roles of fathers as the main breadwinners of their families, and therefore they had to reduce or leave workforce to manage learning and household responsibilities.

Probably not a lot [of help from my husband]. He's literally in the bedroom. And he's got meetings upon meetings upon meetings. So yeah, I literally might see him once or twice during the day… Yeah, he can't be disturbed and then I'm sort of running around between the kids and my work. [laughs]… It feels that way, I guess he's the main worker in the house. So, I've just got to manage the best I can. But it's hard. I still got to go do groceries and do the washing and [laughs] yeah.

(Parent of a primary student in a specialist school, round 2)

I can't return to the workforce, like I was planning on doing. So, there's no, there's no opportunity for me either. Because I'm going to be at home with the children and I need to be obviously, my role in caring for [student's name] means that I can't just get the local babysitter to come down and look after the kids anyway. I was limited before, but I am severely limited now in the sense that I can't even consider it. I couldn't consider going out and getting a job. I couldn't consider going out and doing anything at the moment because [my partner] needs to be available to work. In order for us to be able to afford to live.

(Parent of a primary student in a specialist school, round 2)

One mother reported a sense of disempowerment and loss of identity, agency, and independence due to doing more domestic and care-related work despite having supportive partner who equally shared household chores.

I felt very much like I'd been picked up and locked in the 1950s, with the assumption that as the mother I had to be available to help with remote learning… I might say that I took responsibility for remote learning, partly because I'm the teacher, partly because I was unemployed suddenly, and partly because that's what they expected women to do, at least I didn't have the same level of expectation that I would also be responsible for maintaining the house.

(Parent of a primary student in a mainstream school, round 3)

One father interviewed in round 2 described himself as "Mr Mum", who manages supporting their child with schoolwork and domestic chores. However, his comments about undertaking domestic activities as "Mr Mum" are reflective of the expected societal norms around the division of labour in the family.

I'm the house cleaner, Mr. Mum. I mean I've always been Mr Mum other than the housework really because [mother] does shift work, I'm self-employed so I can shuffle around and juggle around what I'm doing and where I'm going… so I mean I've always been the one that takes [child's name] to and from school and all of our lessons and stuff.

(Parent of a secondary student in a specialist school, round 2)

Impact on household relationships

Extended periods of time together in confined indoor spaces took a toll on household relationships. Increased tension and conflict between parents and students were commonly reported, particularly at the start of new periods of remote learning. There was reportedly more tension in sibling relationships, with arguments and teasing occurring more regularly than usual. This impacted on learning when siblings shared working spaces.

They were fighting a lot more, […] and because they were in each other's face every day, they were kind of doing it every day.

(Parent of a secondary student in a mainstream school, round 3)

More frequent arguments between students and parents were also reported. Parents gave examples of what were considered last-resort strategies, such as allowing more screen-time than usual, to 'distract' children and reduce tension in the household.

Increased time spent at home also spawned new opportunities for some families who reported positive relationship development. One parent reported improved communication between siblings when the siblings without disability spent greater time with the student with disability and learned better ways to communicate with him.

My older sons are much better at communicating with him now. Beforehand, I was always there to facilitate the communication. Whereas during the lockdown, [the need to communicate] was intensified […] and they had to learn how to do it themselves. […] They learned how to use PECS [picture exchange communication]. They didn't have that patience in the past.

(Parent of a primary student in a specialist school, round 3)

More time for family leisure activities, such as board games and going for walks together, enabled members of some households to strengthen interpersonal bonds.

We all notice how much he progressed. So, he went from being a silo, to being part of the family dynamic. You know, we did wonderful things like on the Saturday night, we'd have a family dinner, and that was everyone's choice, you know, we'd have different choices of meals. And that was a really fun evening. Well, the weather was so much better than it is now. But we do, like he'd take a walk with his sister. He'd take a walk with his father. I mean, he sees me more than enough during the day, so he doesn't need to take a walk with me.

(Parent of a secondary student in a mainstream school, round 3)

The increased periods of time together combined with a perceived lack of agency had a significant impact on household relationships. While each family's context was unique, the shared perspectives highlight the importance of access to external supports and networks of care during times of prolonged stress.

Discussion and conclusion

This study is unique in documenting real-time experiences of families of students with disability during multiple lockdowns in Victoria over a period of 14-months that included multiple transitions to and from remote learning. Remote learning during COVID-19 lockdowns has been disruptive for most students (Morse et al., 2022; Van Bergen & Daniel, 2022; Ziebell, Acquaro, Seah, & Pearn, 2020), yet in this study participants with disability experienced additional barriers in receiving adequate support. It is interesting to note the common themes that emerged in all rounds of interviews of this study highlight the exacerbation of existing systemic challenges prior to the pandemic. The extended duration of this study suggests there were learnings and adjustments that addressed some of the issues over time but also longer-term impacts of remote learning on the wellbeing and development of students with disability.

Children and adolescents with disability are often excluded in emergencies and disasters and this exclusion has been evident during the pandemic (M. Mann et al., 2021; Stough, Ducy, Kang, & Lee, 2020). Findings from this study highlight the pre-existing systemic challenges around communication and partnership between schools and families. These findings align with CYDA's snapshot survey report during the initial stage of the pandemic, which also highlighted systemic challenges around IEPs, lack of communication between schools and families of students with disability, and the impact on wellbeing of parents and students with disability (Dickinson et al., 2020). Likewise, Mann et al. (M. Mann et al., 2021) in their scoping review detailed disproportionate negative outcomes for students with disability during periods of remote learning, which is likely due to a combination of the factors identified in this research. Both Dickinson et al. (Dickinson et al., 2020) and Mann et al. (M. Mann et al., 2021) bring to attention the central importance of effective communication. Analysis of the interview data showed that inconsistent communication between regulatory bodies, schools and families resulted in inequities beyond just a lack of service, particularly during the first lockdown. Experiences shared by the some of the parents in this research project suggest that a lack of communication and support occurred in both mainstream and specialist schools, but further work is required to better understand patterns of support in each category of school. What was evident in both the CYDA survey and in this study was that parents felt unclear what the initial transition meant for their child in terms of school attendance, or how they should proceed to best support their child's learning. Parents in our study largely reported that communication did improve in the subsequent remote learning periods, but they still reported frustration with the lack of preparedness for remote learning by the schools and regulatory bodies even after multiple lockdowns.

An IEP is a holistic document that takes into account social, cultural, physical and psychological needs and timely goals of a student while they are at school. When developed in an effective way in consultation with the young person and carers, the IEP can document the discourse around the goals a child or young person has for their schooling (MacLeod, Causton, Radel, & Radel, 2017). This allows supports and interventions to be informed in a way that the student and their primary carer can respond to the school experience in discourse with those working with the student. This discourse of stakeholders can allow attentiveness to sometimes hidden injustices, and a firmer understanding of where different responsibilities are best assigned to competently and responsively meet the needs of the student in the school and classroom.

The experiences relayed by families in this research include a perception by some that schools were not responsive to their needs. SSGs and IEPs are examples of an opportunity for students and their primary carers to discuss the effectiveness of the supports they are receiving. While much effort is expended on attaining a diagnosis for funding support (Yates, Dickinson, Smith, & Tani, 2021), the opportunity to build attentive, just, competent, and responsive support during and before the pandemic was rarely described. There is little evidence of the discursive responsive give and take that would allow for care for the student and their families in a way that provides them a voice in expressing their needs and what works for them. The lack of contact many students and their families experienced from their schools can be seen as indicative of the challenges everyone was facing, however the fact that respondents recount not being included in activities offered to other students or being given work inappropriate to their skill levels demonstrates that the inclusive aspirations of Australian education policies, such as the Alice Springs (Mparntwe) Education Declaration (Education Council, 2019) and the Disability Standards in Education (Ruddock, 2005) have not been met. However, valuable information about these learnings shared between students, parents, schools, and teachers could provide an opportunity to create an informed discourse about what is and isn't working and the importance of social as well as academic support.

While universal approaches to inclusive education are important, there also needs to be a consideration of individual strengths, interests and areas of challenge. There is a clear need for acknowledging that students with disability have diverse needs for learning according to their individual functional capabilities, all of which continued or were heightened during the remote learning experience. Each student had differing functional needs, and the remote learning activities in many cases were not adapted to suit individual learning profiles. Where individualised were offered, particularly during the second round of interviews, families and students reported better learning experiences during remote learning. An additional balance is also required where the student is asked to provide insight and suggestions regarding their educational experience and adults consider the student's maturity and capacity for understanding during decision making (Miller, Colebrook, & Ellis, 2014). The tools that should define some of this work, such as IEPs, were not useful or effectively implemented, and funded educational assistance was not always allocated to the continuing support of access to education for these students.

Parents had to play a significant role to fill in this gap by stepping into teachers' role in most instances either by adapting learning programs themselves or advocating and working closely with teachers and education support staff to modify learning activities. Parents recommended reducing student workloads, greater flexibility around times to complete schoolwork, and additional time for students to ask teachers questions during live classes or in face-to-face interactions online. The reported gender difference in the work falling disproportionately to women is also reported in research across Australia during the pandemic (Craig & Churchill, 2021).

A lack of acknowledgement and focus on mental health and wellbeing were common concerns. Parents recommended teachers should conduct regular check-ins with parents and students themselves to gauge and monitor their emotional wellbeing and provide psychological support. Experiences of inconsistent support for students with disability to engage with education and disability-related services during the pandemic meant that families had to take on an even greater role in meeting these needs. This was reported as often being at the expense of their own paid employment and in the context of existing financial inequalities experienced by many individuals with disability and their families. The subsequent financial stress also compounded existing and COVID-related mental health concerns. Significant investment is therefore required to support students with disability and their families recover from the financial and mental health and well-being impact of the pandemic.

Although there was flexibility with NDIS support, confusion as to whether this included education related activities remained. Many reported doing 'what they needed to do,' planning to deal with the consequences of these decisions at a later point in time. This situation highlighted the ongoing and vexed issue of the delineation of responsibility between NDIS and education for supporting the educational needs of students with disability. Even in non-pandemic times there were examples of students left without supports because it cannot be agreed as to who is responsible. Going forward these systems must work more closely together to ensure continuity and co-ordination of supports for students with disability, whether in remote or school-based learning.

The experience of many participants in this study was that the schools seemingly had low expectations of students with disability. This also appears to be a systematic issue. As identified in the literature, resourcing structures in education can be identified as attributing to a deficit view of disability (Macartney, 2012), where disability is considered an issue with the individual rather than an issue with the school context that does not provide an physical, cultural and social environment that is accessible to all students. The paradox of education and inclusion is that there is the stated intent to have inclusion for all, but in many practices, inclusion actually turns to social mechanics to assimilate individuals to a dominant normative idea of what a student should be while in the process demonstrating that some students do not meet those norms (Corcoran, Claiborne, & Whitburn, 2019). In turn, teachers are then led to believe the pedagogical skills required to teach students with disability are different than those they possess as a mainstream classroom teacher (Macartney, 2012). While these issues existed pre-pandemic, the evidence in this report indicates the experiences of these families found these tensions exacerbated during the pandemic. Moving forward, attitudes and supports for teachers to develop the skills and confidence to support all learners in their classroom will need to be a priority if we are to improve the quality of remote teaching in future crisis.

The return to school also had challenges associated with it. As identified in this study, the return was staggered with different families experiencing different levels of access to some in person learning even during lockdown. Families and children in this study noted that there was more attention paid to the social and emotional needs of students with academic needs coming second when school returned to full capacity attendance. The impact of isolation on all people, with particular concerns for those with limited access to social networks during the lockdowns was established across the Victorian population, where the longest isolation periods were experienced. Mental and social health of teachers and students were of noted concern for school administrators (Flack, Walker, Bickerstaff, Earle, & Johnson, 2021) and many of these measures were in response to trauma informed practices of recovery post disaster (Cahill, Dadvand, Shlezinger, Romei, & Farrelly, 2020; Gibbs et al., 2021).

However, for students and families in our study there were also some positive outcomes from the experience of lockdown. Some identified increased ability to learn independently, and for others, the ability to participate in learning activities 'at a distance, via online communication rather than in-person, helped build some students' confidence around participating in group activities. For some students, remote learning provided a less stressful learning environment than on-campus learning. Greater flexibility around the quality and quantity of schoolwork reduced stress among some students. For students with restricted mobility or impaired executive functioning, and their families, learning from home reduced the physical and psychological fatigue associated with getting ready for school. Access to quiet learning spaces and modified learning activities were also associated with improved mental wellbeing for some students. Parents also perceived that they had better insights into their children's education that is helpful to support their children and in communication and advocacy with the schools.

Limitations of this study

While this study offers vital insights into the lived experiences of the participants, it is also important to recognise the inherent boundaries and limitations of the employed research design. The study provided an intimate portrait of the experiences and voices of 12 families in metropolitan Melbourne, Australia. Empowering these voices is of fundamental importance but other voices also need to be heard. This research does not include the perspectives of teachers, teaching assistants and school leaders. Our school systems and the Department of Education and Training Victoria had to act swiftly during this pandemic with little warning or preparation. Although parents in this study to varying degrees expressed frustration with the support they received from their respective schools, they were all sympathetic to the complex challenges experienced by teachers and support staff in the transition to emergency remote learning.

While we attempted to recruit families through an open invitation across different networks including CYDA, we were only able to recruit families from a specific demographic in this study. All parents in this study come from metropolitan Melbourne and acknowledged the fact that they are sufficiently resourced to support their children's remote learning. Also, except for a couple of families, the sample represented public school settings. We could not extend our invitation to more than 12 families for this study due to limited time and funding. Being unable to capture experiences of families from lower socioeconomic background and from culturally and linguistically diverse communities leaves a significant gap that requires exploration to fully comprehend the effects of remote teaching on students with intersecting historically marginalised identities. Parents in this study expressed concerns for families from low resource settings and the kind of support they might be receiving during remote learning. It is worth noting that an online survey of teachers Australia wide indicated that only one in 10 teachers reported that every student in their class had access to reliable internet at all times and the 'digital divide' was evident at socio-economically disadvantaged schools as the students were less likely to be digitally ready to access online learning and the fact teachers felt they were not equipped and trained to switch to digital lesson plans (Ziebell et al., 2020).

Despite the small number of families represented in this study, we had achieved saturation for the core themes presented, which may be because all families are from similar socioeconomic background, and parents appeared to be fully aware of the functioning needs of their children and the rights to which they were entitled. While further research is required to document experiences of diverse groups of families of students with disability, this study findings align with existing research (Brown, Te Riele, Shelley, & Woodroffe, 2020; Dickinson et al., 2020; M. Mann et al., 2021; Stough et al., 2020) on the situation of students with disability during the pandemic.

All parents participating in this study had long been advocating for their children, whether this be for the quality of their education and experience at their schools, or for their access to funding through the NDIS. For many parents, their experiences through the COVID-19 pandemic were just a continuation of their lifelong advocacy for their child's fundamental human rights.

Conclusions

There is no doubt that the emergency transition to remote learning caused great anxiety for students with disability and their families.

The experiences of the students and parents who participated in this study bring to attention a collective sense of being a secondary priority for many schools and the Department of Education and Training Victoria. Systematic and local barriers, both cultural and technical, created challenges for students with disability to participate in learning on an equal basis to others.

These challenges were evident in both remote learning and when they returned to schools in the following academic year. These impacts were particularly of concern for students with disability during periods of transition, such as moving from primary to secondary education and those finishing schooling.

Despite these challenges, there were positive experiences also shared by the participants. As subsequent lockdowns occurred, many families did report positive changes as individual teachers, school support staff and the students became more experienced and adept at dealing with the complex challenges presented by emergency remote learning.

By identifying what supports and strategies were effective for these individual students, researchers and policy makers can begin to consider a more cohesive and planned response if remote learning is required in the future.

The findings from this study should inform future discussions around evidence-informed responses in emergencies that create the conditions to be academically and socially inclusive of all students.

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