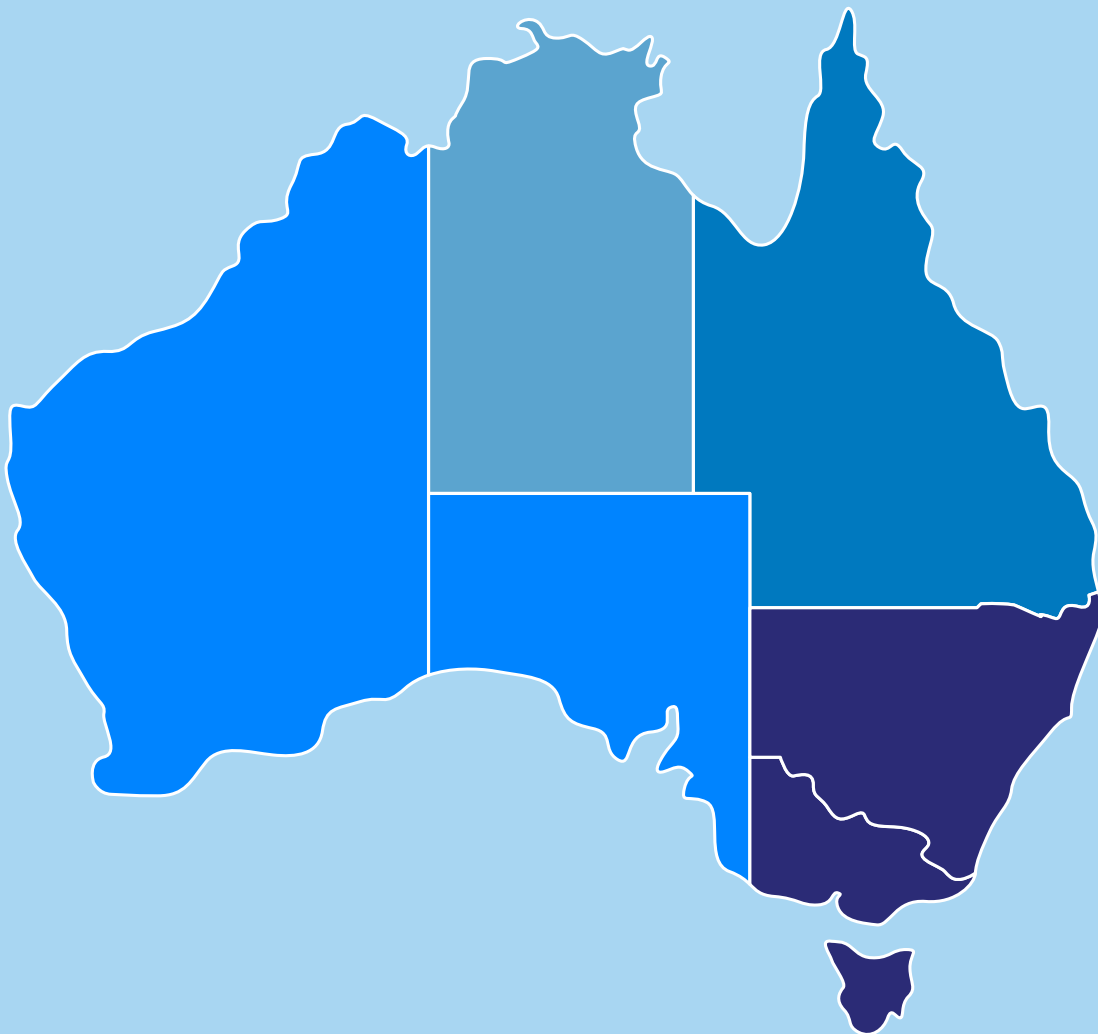Pivot CAP
Coalition of Australian Principals

PRINCIPAL PERSPECTIVES ON THE IMPACT OF COVID-19: PATHWAYS TOWARD EQUITY IN AUSTRALIAN SCHOOLS

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About Pivot

Pivot Professional Learning, a leading educational data and insights company based in Melbourne, Australia, provides research-based guidance for school leaders, classroom practitioners and others in the education sector. Pivot's student perception surveys and aligned support systems, used in over 75,000 Australian classrooms, aim to enhance teaching by harnessing the power of student voice.

Pivot's research has focused on a variety of critical topics, including: pedagogical content knowledge; teacher professional learning communities; the education technology landscape; the impact of COVID-19 on teaching, learning and leadership; and socioeconomic disparities in the pandemic's effects. Pivot has been an evidence partner to major educational organisations and agencies across Australia, including:

- Northern Territory Learning Commission (NTLC), Northern Territory Department of Education;
- Bastow Institute for Educational Research, Department of Education and Training, Victoria;
- Centre for Education Statistics and Evaluation (CESE), Department of Education, New South Wales;
- Australian Association of Mathematics Teachers (AAMT); and
- Education Perfect (EP).

About the Coalition of Australian Principals (CAP)

The Coalition of Australian Principals (CAP) is an unconstituted, collaborative group of the six national peak principals associations, which first came together to discuss topics of common interest in 2019. CAP has developed a Memorandum of Understanding (MOU) that unites its six peak associations in collaboration. These associations are the:

- Australian Special Education Principals Association (ASEPA);
- National Aboriginal and Torres Strait Islander Principals Association (NATSIPA);
- Australian Primary Principals Association (APPA);
- Australian Secondary Principals Association (ASPA);
- Australian Heads of Independent Schools Association (AHISA); and the
- Catholic Secondary Principals Australia (CASPA).

Each association is independently constituted, and they are separate, stand-alone professional organisations. Special education is represented by the Australian Special Education Principals Association (ASEPA). Aboriginal and Torres Strait Islander principals are represented by the National Aboriginal and Torres Strait Islander Principals Association (NATSIPA).

The primary school sector is represented by the Australian Primary Principals Association (APPA). This peak association represents the Australian Government Primary Principals Association (AGPPA); Australian Catholic Primary Principals Association (ACPPA); and the Independent Primary School Heads Association (IPSHA). AGPPA, ACPPA and IPSHA represent their members and the specific interests of their sectors, while APPA is the collective voice of primary school principals. All four primary sector associations sit at the CAP table.

In the secondary sector, the Australian Secondary Principals Association (ASPA), the Australian Heads of Independent Schools Association (AHISA) and the Catholic Secondary Principals Australia (CASPA) represent the principals in their respective sectors of Australian education.

The CAP coalition is characterised by high levels of trust, respect and abiding commitment to all sectors of school education in Australia. CAP looks forward to continuing its collaborative work with education ministers, government departments and all organisations connected to school education in Australia, including Pivot Professional Learning.
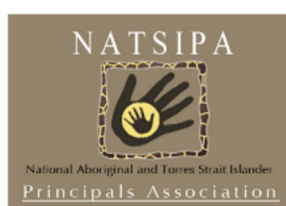
Table of Contents

Executive summary

Introduction

In late 2020, Pivot Professional Learning, in partnership with the Coalition of Australian Principals, invited principals of primary and secondary schools across the nation to participate in an online survey about their experiences during the COVID-19 pandemic. In all, 456 principals across the government, Catholic and independent sectors – covering the entire spectrum of the Index of Community Socio-Educational Advantage (ICSEA), a measure used to assess equity in Australian education – responded to the survey.

Like our international survey of teachers fielded in April 2020, these new data from principals provide stark insights into the continuing challenges faced by school communities during the pandemic. The analysis has also laid bare profound structural inequalities in the school system that long predate the pandemic. In light of the findings, based on the voices of principals from across the country, our report contains a series of recommendations for school support strategies and policies to ensure all Australian students have the same opportunity to learn – regardless of school closures or socioeconomic background.

In addition to their many worrying observations, some principals who took part in the survey noted a few positive outcomes and discoveries from their lockdown experiences. Some of these insights may influence the years ahead.

Main findings

Resilient school communities

Our survey revealed how school communities have overwhelmingly rallied together through the pandemic. As the principal of a lower-ICSEA government school in Victoria reported: "This school community has been remarkable in the way it has endured and then thrived during the pandemic. Care, compassion, generosity of spirit and goodwill have existed throughout."

- **Many schools responded to the crisis by expanding support services to school communities.** More than half of the survey respondents reported expanding mental health services to school communities. One principal of a government specialist school wrote: "The wellbeing of parents and carers has been of great concern as school offers them a break which they could not get while their children were learning from home." Most of the struggles described were financial, but mental health and domestic violence were also mentioned. Many principals said these problems were not new. Rather, the dynamics of remote learning, which made students' home environments more visible to teachers and principals, increased awareness of family struggles.

- **The pandemic brought school communities closer together.** A significant majority of principals reported improved relationships with their school communities – in part because remote learning increased the visibility of teachers' practice. A secondary principal wrote: "Parents were very affirming about the great job teachers do. There was genuine respect." Many principals reported increased family engagement. Some appreciated how video conferencing had enabled parent participation and indicated plans to continue using the technology after the pandemic. Some also discovered that the partnership between school and families was stronger than they had realised.

- **The Aboriginal and Torres Strait Islander principals in our sample supported community engagement by providing culturally responsive communication in their leadership practice.** Seven Aboriginal and Torres Strait Islander principals responded to an open-ended question about their roles during the pandemic. They described acting as "cultural brokers" among school, government and community – for example, in upskilling non-Indigenous staff on Indigenous affairs and cultural protocols and setting expectations for culturally responsive and sustaining instruction.

Socioeconomic disparities in learning

The survey results suggest students at higher-ICSEA schools have experienced significant advantages over those in less affluent schools throughout the pandemic. Perceptions about students' academic progress were largely negative, particularly among lower-ICSEA principals.

- **Principals of socioeconomically advantaged schools were significantly more likely to report a successful transition to remote learning than those leading less advantaged schools.** Among principals of schools with an ICSEA score above 1000, 65.6% reported a successful transition, compared to just 36.1% from lower-ICSEA schools. These findings suggest the need for additional research to understand which factors associated with being lower-ICSEA (such as funding, staffing and technology access) were the greatest obstacles.

- **Principals of lower-ICSEA schools were significantly more likely to report insufficient technology access.** This finding held true for every type of technology, such as devices and internet access.

- **Principals at lower-ICSEA schools were significantly more likely to believe the impact of the pandemic on student learning had been negative (52.3% vs. 29.6%).** Surprisingly, however, 22.0% of lower-ICSEA school principals, and 34.8% of those at higher-ICSEA schools, actually rated the impact on student learning as positive.

- **Significant socioeconomic differences emerged in estimates of student learning.** Most principals estimated students had learned 51-90% of the curriculum in the past six months, but those at higher-ICSEA schools were twice as likely to report students had learned 91-100% of the curriculum. Many principals at lower-ICSEA schools reported plans to address learning loss in the coming year.

Impacts on teacher and student wellbeing

School heads reported positive impacts on teachers' professional practice – but negative impacts on their wellbeing. When it came to students, principals cited social isolation, a lack of routine and physical activity and limited availability of in-home support of remote learning as big challenges.

- **65.7% of principals thought the pandemic had a positive impact on the quality of teachers' instructional practice.** Further, a majority of principals observed a positive impact on teachers' relationships with students (66.4%) and principals (65.2%). Future research into these areas could guide further development of promising practices that have emerged from the upheaval.

- **Most principals perceived a negative impact on teachers' mental health (81.2%) and social-emotional health (76.5%).** This mirrored findings from educators who responded to Pivot's national survey in April 2020.

- **A large majority of principals (79.5%) reported that the pandemic had negatively impacted students' mental health and wellbeing.**

- **Higher-ICSEA school principals were most concerned about students' social isolation, while those at lower-ICSEA schools were more worried about lack of routine and access to technology.**

- **Principals who work(ed) in schools with higher proportions of students with disabilities were more likely to have increased their advocacy during the pandemic.** The need for this was largely due to the shift to remote learning being, accompanied by reductions in key supports and normal service provision for students with disabilities across all educational sectors.

Impacts on the leadership practices of principals

The survey revealed the critical dependence of schools on strong, effective leadership from their principals during a crisis. The pandemic has forced principals to work harder, use existing resources in new ways and hone important skills.

- **School principals have reported an increase in workloads – but not a corresponding decline in job satisfaction.** Of those who responded to the survey, a staggering 97.2% reported that their workloads had increased as a result of the COVID-19 pandemic. Yet only 30.3% reported a decrease in job satisfaction, and 16.6% said their job satisfaction had actually increased.

- **Communication and crisis planning were rated the most useful pandemic leadership skills.**

- **Colleagues were the most relied upon source of professional support for principals.** Almost all principals (91.3%) reported relying on colleagues for professional support, while fewer than half that proportion (39.7%) reported seeking support from a professional association.

Principal plans and priorities for the 2021 school year

Principals were asked about their priorities for the coming school year, with a view to understanding what types of investments would best support their goals.

- **The top three investment priorities for 2021, across all ICSEA levels and sectors were related to staffing.** The largest proportion of principals (75.6%) rated investment in teachers as the highest priority, followed by social workers and school psychologists (72.3%).

- **Lower-ICSEA principals were three times more likely than those in higher-ICSEA schools to nominate technology investment as a priority.**

- **A notable minority of principals expressed plans to develop blended and/or remote learning beyond the pandemic.** In some cases, these plans were seen as a way to individualise schooling for students who may benefit from the opportunity to continue learning from home.

- **When asked about preparing for potential future school closures, principals across all sectors cited training in digital pedagogy for staff and student wellbeing as their top priorities.**

- **About a quarter of qualitative responses about priorities for 2021 described plans for wellbeing initiatives.** Planned strategies included social and emotional learning, which one principal described as "just as important as academic learning as this is what has gotten children through tough times of COVID-19."

Pivot's Recommendations

1. Prioritise teacher wellbeing

In the short term, Pivot recommends that policymakers temporarily expand alternative pathways into the classroom for teachers and support staff to help ease educators' workloads. In addition, we propose more inclusion of teachers in school wellbeing initiatives.

Over the long term, people who enter schools via alternative pathways will need comprehensive training to ensure high-quality instruction and classroom support. Policymakers should also consider new ways to reduce the administrative burden on teachers.

2. Expand digital inclusion

In the short term, Pivot urges policymakers to conduct a nationwide audit of access to technology and connectivity and make plans to close remaining gaps. Policymakers should also support schools in upskilling teachers in digital pedagogy.

In the long term, the federal government should invest in the expansion of broadband infrastructure to make remote, hybrid and flipped instructional options more widely available. This is important not just for inclusion and academic achievement, but also for future crisis preparedness.

3. Mitigate learning loss among vulnerable students

Pivot recommends that policymakers and sector leaders allocate additional resources to support extra tutoring in under-served communities. Some tutoring could be done through schools, with peer, community member or teacher-led tutoring targeted to specific learning gaps.

Given the likely future need for distance learning due to fire, pandemic or other causes, clear plans – including non-digital ones – must be developed to reach students lacking access to broadband infrastructure. Schools must also develop individualised support services to reach students with disabilities when schools close, and explore new approaches to remote teaching of the youngest students.

In the longer term, Pivot recommends both research and advocacy to expand policies aimed at reducing student vulnerability to learning loss.

4. Care for the wellbeing of students

Australia is facing a crisis in student mental health and wellbeing. In the short term, policymakers and sector leaders should create pathways for every school to have mental health professionals on staff. In addition, principals should be connected with wellbeing tools and interventions that have been vetted by researchers and mental health professionals. These may include ongoing monitoring of student wellbeing and whole-school interventions aimed at promoting belonging and preventing bullying. Integrating social and emotional learning into the curriculum at every grade level can also support resilience and student mental health. In the long term, policymakers should strongly consider the establishment of dedicated funding streams for wellbeing initiatives, and sector leaders should leverage public-private partnerships to increase system capacity in this area. Also, organisations in the sector can develop coalition approaches to sharing best practices in cultivating wellbeing at schools.

All wellbeing initiatives need to be responsive to their context, both organisational (i.e., school) and cultural (i.e., community). For example, one key strategy for supporting the wellbeing of Aboriginal and Torres Strait Islander children and youth is increasing the representation of Aboriginal and Torres Strait Islander peoples on school staff, especially in leadership. Additionally, providing opportunities for students to have voice and agency in their own learning encourages initiatives that are co-created by students and can further promote wellbeing.

5. Design and build infrastructure for change

In the short term, policymakers and stakeholders should support school principals and school networks in crisis planning. Changes to safety protocols and school buildings, planned in consultation with public health experts and reflecting the latest science, should prioritise COVID-19 prevention with the intent of safely keeping in-person schooling open as an essential service for those who need it most. Crisis plans should outline steps for rapid communication, quick pivots between instructional formats (e.g., in-person, hybrid, fully remote) and the urgent provision of supplementary mental health services.

In order to prevent disparities in the disruption of schooling in the future, policymakers should begin adapting buildings to reduce vulnerability to pathogen transmission and climate change-related natural disasters. Future investments in the physical infrastructure of the school system should involve sustainable, pandemic-proof, climate-proof design.

Pivot also recommends that principals in the sector form a cross-sector public-private advocacy coalition dedicated to educational improvement and educational justice.

Introduction

Educators across Australia are embarking upon a new academic year after an unprecedented year of change and disruption. Pivot Professional Learning's survey of over 3,000 educators across Australia and New Zealand during the early stages of the coronavirus pandemic in 2020 showed that many teachers lacked confidence in using instructional technologies as they rapidly shifted to a digital model of distance learning. These difficulties were compounded by a widespread lack of access to broadband internet and devices (laptops and tablets) facing both teachers and students. Further, teachers were deeply concerned about the wellbeing of their students, many of whom experienced learning loss and social isolation. At the same time, dramatic increases in workloads, coupled with the dual needs of quickly learning digital pedagogical skills and caring for their own families while working from home, constituted a serious threat to the wellbeing of teachers themselves. Deeper analysis of the data revealed that these challenges were significantly worse in historically-marginalised communities grappling with economic vulnerability.[2]

Knowing that principals shared these experiences and played a crucial role in their schools and communities, Pivot wanted to gain more insight from Australian principals about the experience of leading schools through the pandemic. To this end, in late 2020, Pivot, in partnership with the Coalition of Australian Principals, invited leaders from government, Catholic and independent schools serving students from primary level to Year 12 (P-12) to add their voices to our *2020 Shifting Landscape of School Leadership in Australia Survey*. This cross-sectoral survey, comprising 42 items and taking approximately 15 minutes to complete, aimed at highlighting the experience of principals across the entirety of the Australian educational landscape during the COVID-19 pandemic. There were two primary aims: to understand the successes and challenges of leading schools at this difficult time and to identify how policymakers and stakeholders can support principals and their school communities in 2021.

Similar to Pivot's July 2020 paper about socioeconomic disparities, this new research applies a critical lens to emphasise the need for both immediate and future interventions to advance equity in the Australian educational system. This report presents key findings from analysis of qualitative and quantitative responses from 456 principals serving in a range of roles in a variety of school settings.[3] The analysis illustrates many commonalities in the experiences of teachers (captured by our previous research) and principals during the pandemic. As with the teacher data, this research revealed significant differences in the concerns, needs and priorities of Australian principals associated with the level of socioeconomic advantage in their school communities.

Recent work, including our own, has shown how the pandemic has laid bare longstanding structural inequalities in the Australian school system.[4] Australian policymakers have a historic opportunity to devise inventive solutions to the country's most pressing education problems, many of which predate COVID-19.[5] Thus, our report also outlines Pivot's recommendations for school support strategies and policies in 2021 and beyond to ensure that all Australian students have the same chance to learn — regardless of school closures or socioeconomic background. These recommendations have emerged from a synthesis of findings from our previous research, findings presented here and careful review of relevant scholarly literature. The recommendations are ambitious because the circumstances call for bold action. If stakeholders meet this moment with innovation, targeted investment and an assets-based approach to empowering school communities, then the educational system may emerge from the coronavirus crisis moving toward a more just and equitable system that supports the flourishing of all Australian children.

Context of research

At the time of writing, Australia's COVID-19 vaccination campaign, which aims to vaccinate the entire adult population by October 2021,[6] is about to begin.[7] Unlike many countries, Australia has thus far avoided a third wave of infections, likely because of its stringent quarantine protocols for travellers and swift lockdowns when cases arise.[8] Although vigilance is still necessary, much of Australia has reopened without precipitating outbreaks, which we saw evidence of in our data. As of November 2020, 92.3% of principals in our sample (*n* = 386)[9] reported that their schools were once again fully open for in-person instruction.

Despite the near-universal reopening, there was considerable variation in the period of time that principals' schools had offered remote learning due to the pandemic. Schools in our sample were closed for a median of 12 weeks in 2020, but individual school closures ranged from 0 to 30 weeks. As shown in Figure 1, the longest periods of remote schooling among the schools represented in our data were in Victoria, New South Wales and Tasmania.

Figure 1. Median weeks of remote schooling by state/territory
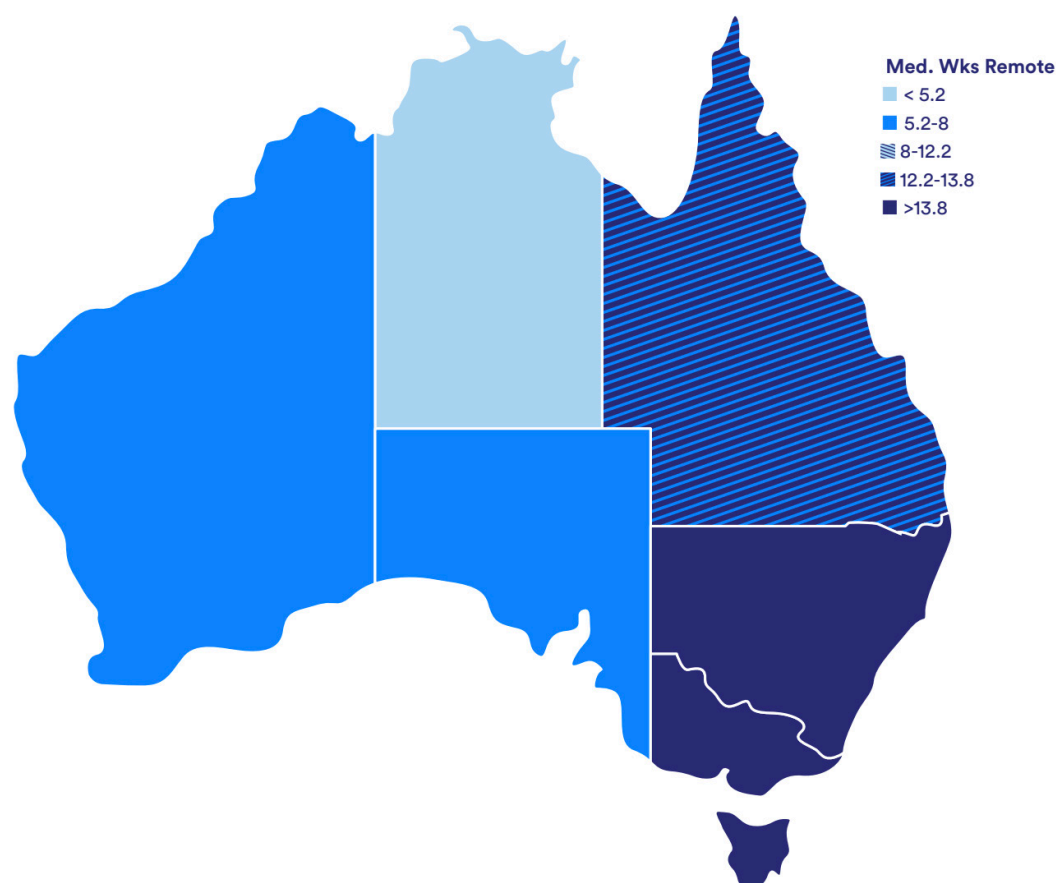
Although our sample is not strictly representative of the population of Australian principals, this geographic pattern is consistent with reported case rates and resulting policies in these states. (Note that although Queensland ranks third in total cases, Tasmania ranks third in cases per 100,000 population).[10]

Table 1 below shows the distribution of Index of Community Socioeducational Advantage (ICSEA) scores for the schools in the sample.[11] ICSEA combines data about the occupations and educational level of parents in the school community with the percentage of Aboriginal and Torres Strait Islander students and degree of remoteness. This makes ICSEA a valuable tool for assessing educational equity because it captures the intersection of socioeconomic stratification, racial injustice and geographic marginalisation. The index is created with a median score of 1000, which was used as the division for the "lower-ICSEA" and "higher-ICSEA" school groups in this report. Higher-ICSEA schools were over-represented in the sample relative to the population, but the 36% (*n* = 152) of the sample with ICSEA scores below 1000 was sufficient to compare the two groups.[12] A more complete summary of the sample can be found in the Methods Appendix at the end of the report.

Table 1. Distribution of ICSEA scores in the sample

ICSEA Score	Distribution Percentage
Less than 900	7.1%
900-949	9.5%
950-999	19.4%
1000-1050	38.9%
1051-1100	12.8%
More than 1100	12.3%

Note. n = 422

Attention to equity is more critical than ever. Socioeconomic stratification in the Australian school system has intensified in recent years as affluent families have become more concentrated in affluent schools, partially due to school choice policies.[13] At the start of the pandemic, historic funding disparities and geographic isolation left lower-ICSEA schools facing the challenge of remote learning with fewer resources, teacher shortages and more vulnerable students than higher-ICSEA schools.[14] Ongoing decentralisation, combined with cuts to central education departments, meant that many schools had to create a workable remote learning system from scratch.[15] Schools scrambled to either provide students with internet access and technology or find an alternate, paper-based, way to teach students. Schools also had to help families provide a proper learning environment at home, including space and material resources, such as desks, books and lighting.[16] Socioeconomic disparities likely made these monumental tasks more challenging.

Pivot tested the data for statistically significant patterns associated with the length of remote learning,[17] as well as other salient factors that could plausibly influence responses. These included: years in a leadership role; school sector; percentage of students with disabilities; and ICSEA scores.

Key findings

In this paper we set out to provide the key findings of our analysis along with policy recommendations that build upon our past COVID-19 research. Our key findings are organised into the following categories: the resilience of school communities; the impact of socioeconomic status on learning; impacts on teachers and student wellbeing; and impacts on the leadership practices of principals. These sections are followed by a summation of principals' thoughts about their plans and priorities for 2021 and Pivot's policy recommendations.

Resilient school communities

In spite of the many adversities presented by COVID-19, our data indicate that school communities of all types have rallied together to support one another during the pandemic. In response to an open-ended question about what they had learned about their school community during the pandemic, the principal of a lower-ICSEA government school in Victoria wrote:

> *This school community has been remarkable in the way it has endured and then thrived during the pandemic. Care, compassion, generosity of spirit and goodwill have existed throughout. Parents, students, staff members and the broader local community have actively supported each other.*

Many other respondents echoed this sentiment and highlighted the resilience of their school communities in the face of profound challenges. For example, a principal at a higher-ICSEA Catholic school in Victoria said: "Staff, young people and their families are resilient, agile and flexible." Another principal from a higher-ICSEA independent Queensland school praised resilience while also acknowledging the toll on community wellbeing: "We have a very resilient community who were able to accommodate challenges. Notwithstanding the whole community is feeling fatigued."

Many schools addressed the crisis by expanding support services to their larger school communities.

The data from closed-ended items indicated that many schools addressed the crisis by expanding support services to their larger school communities (see Table 2). Notably, more than half of principals reported expanding mental health services to their school communities. There were no significant associations between the expansion of these services and the length of remote learning, school ICSEA level or school sector,[18] suggesting that the need for more attention to psychological wellbeing was felt across many contexts.

Table 2. Change in services to the school community

Services to school community	
Increased mental health support	61.9%
Increased advocacy	53.1%
Increased food support	37.2%

Note. n = 380

This increase in support services may be related to principals gaining new insight into the struggles of families in their school communities during the shift to remote learning, which was another prominent theme that emerged in qualitative responses. For example, one principal who worked at a small,

government specialist school described: "Families are really struggling. The wellbeing of parents and carers has been of great concern as school offers them a break which they could not get while their children were learning from home." Similarly, the principal of an affluent Catholic primary school shared: "[Families] need more support than we all realise." Across the qualitative data, most of the struggles described were financial, but some principals also mentioned mental health challenges and domestic violence. This finding aligns with 2020 data showing increases across Australia in both intimate partner violence and mental health concerns during the pandemic. Evidence reported in June from the Australian Institute of Criminology suggested that, among women who had already experienced intimate partner violence or control prior to February 2020, half to two-thirds reported increased or more substantial violence during the pandemic.[19] Further, community samples showed an increase in self-reported depression and anxiety symptoms and psychological distress amongst adults above pre-pandemic levels.[20]

Many principals said that these problems were not new. Rather, the dynamics of remote learning, which made students' home environments more visible to teachers and principals, increased awareness of families' struggles. Several principals also observed that although the pandemic did not cause these problems, it exacerbated them. For example, the principal of a lower-ICSEA government primary school in Queensland said they had realised "just how many families are suffering financially and emotionally. Covid-19 has amplified their poverty and distress." At an affluent independent school in Victoria, another principal had a similar response: "The financial and other pressures families are under have become more prevalent."

In addition, the COVID-19 pandemic further highlighted the burden carried by Aboriginal and Torres Strait Islander communities in regards to mental health. Pandemic-related increases, in communities already at higher risk, in psychological distress and death by suicide have been found in other research as well.[21] This research illustrated how COVID-19 restrictions disrupted Aboriginal and Torres Strait Islander children's ability to maintain a strong sense of wellbeing through connections to their community, cultures, country and languages.[22]

The pandemic brought school communities closer together.

Despite the many challenges, in some ways the pandemic brought the school communities represented in our sample closer together. As shown in Table 3, the majority of principals reported improved relationships with stakeholders across their school communities. This improvement was not significantly different among higher- and lower-ICSEA schools or across sectors.[23] In addition, the length of time schools spent in remote learning was not associated with reported changes in these relationships.

Table 3. Changes in principals' relationships with community stakeholders

Principal relationships

Stronger relationships with teachers	76.2%
Stronger relationships with families	71.8%
Stronger relationships with students	59.4%

Note. n = 380

Themes in the qualitative data supported these findings. Some principals described realising that the partnership between their school and families was stronger than they had known. For example, a principal at a Catholic school in New South Wales observed: "The community really values their

constant interaction with the school." Another Catholic secondary school principal in Queensland echoed this: "Schools [support social interaction] superbly through classroom activities, sport, arts, advocacy, functions, events, debating, etc., and the energy generated by these activities – with COVID, a flatness around this was obvious." Nonetheless, as shown in Table 4 below, the majority of principals reported increased family engagement during the pandemic. As with the strength of community relationships, there were no notable variations in changes in family engagement across schools of different ICSEA levels or sectors,[24] suggesting that the unifying effect of the pandemic on school communities was present across many contexts.

Table 4. Changes in family engagement

Family engagement

Increased family engagement in student wellbeing	72.1%
Increased family engagement with teachers	69.0%
Increased family engagement in academics	69.0%

Note. n = 381

The qualitative data also suggested that the increased closeness among principals and family members emerged in part because remote learning increased the visibility of teachers' pedagogical practice for families. As the principal of a higher-ICSEA secondary school explained: "Through remote learning, parents appreciated the deeper knowledge and understanding they developed about how their child learns and their capabilities. Parents were very affirming about the great job teachers do. There was genuine respect." According to an assistant principal at a government school in New South Wales, seeing how "COVID and home learning created new transparency" made them realise that their school had not been "visible enough in terms of showing what and how our students learn."

Many principals mentioned that moving school meetings and events to video conferencing platforms enabled greater parent participation. Some had decided to continue leveraging this technology to keep the momentum in family communication going. Principals described plans to continue offering virtual parent workshops and family-teacher interviews in order to support student learning and community wellbeing.

Cultural brokering and community engagement were core aspects of the experience of Aboriginal and Torres Strait Islander principals who responded to the survey.

The experiences of the Aboriginal and Torres Strait Islander principals in our sample (*n* = 7) illustrated the importance of culturally responsive communication in efforts to engage with school communities. These seven principals comprised approximately 7% of Aboriginal and Torres Strait Islander P-12 principals across Australia.[25] These principals were significantly more likely than the rest of our sample to work at schools with higher proportions of Aboriginal and Torres Strait Islander students.[26] Five of the seven worked in schools where more than 20% of the students were Aboriginal and Torres Strait Islander persons. This was consistent with other research showing that Aboriginal and Torres Strait Islander principals and educational workers in Australia often work in rural, regional, and remote (RRR) schools.[27]

At the suggestion of our partners at NATSIPA, Pivot asked Aboriginal and Torres Strait Islander principals an open-ended question about whether and how there were additional expectations for them in terms of their role.[28] These principals described acting as cultural brokers between

school, government and community. For example, at the school level, they reported upskilling non-Indigenous staff members on "Indigenous affairs and cultural protocols," as a principal at a remote school with more than 20% Aboriginal and Torres Strait Islander students put it. They also worked on communicating expectations for culturally responsive and sustaining education (CRSE) that "better reflects our histories and cultures" and "addresses the racism and mistruths about our First Nations Peoples that unfortunately exist." In terms of community engagement, these Aboriginal and Torres Strait Islander principals also said that they kept relationships centred in communication. As one principal at a government school with a high percentage of Aboriginal and Torres Strait Islander students explained, they provided "cultural explanation" of pandemic-related changes and guidance to the community and its elders.

These findings point to the value of having Aboriginal and Torres Strait Islander principals in Australian schools. Although our sample was very small, the emergent themes align with broader literatures on Indigenous and decolonising principalship, which show how Indigenous principals: prioritise ancestral knowledge; engage in inclusive communication practices; enact Indigenous self-determination; connect with community spirituality through servant leadership; and collaborate with community stakeholders using social networks based on reciprocity and trust.[29]

Further, Indigenous principals can empower Aboriginal and Torres Strait Islander students and staff in their schools.[30] An Aboriginal and Torres Strait Islander principal emphasised the importance of representation in school leadership, explaining that Aboriginal and Torres Strait Islander students "can't be what [they] can't see" and that "our schooling system can only benefit from positive role models for all students in our schools." However, despite 5.8% of school children nationwide identifying as Aboriginal and Torres Strait Islander persons, only about 1% of principals across Australia's approximately 9,500 P-12 schools identify as Aboriginal and Torres Strait Islander persons.

In addition, Aboriginal and Torres Strait Islander principals may be more likely to take a holistic approach to schooling that centres the physical, mental, cultural and spiritual wellbeing of Aboriginal and Torres Strait Islander children.[31] One Aboriginal and Torres Strait Islander principal shared their concern about the high rates of psychological distress in their community: "It is essential to have school leaders who come from a similar place to bring understanding and appropriate support for our students without judgement and stigma." This leader attributed the distress not only to the pandemic but also to ongoing community marginalisation and the need for a reconciled Australia.

Socioeconomic disparities in learning

Pivot's analysis showed many statistically significant associations between school ICSEA score and principals' perceptions of the pandemic's impact on their students. These patterns consistently suggested that students at higher-ICSEA schools experienced advantages relative to their peers in less affluent schools. Higher-ICSEA school principals reported more successful transitions to remote learning, and they were less concerned about students' academic progress and engagement than the principals of lower-ICSEA schools.

Principals of higher-ICSEA schools were significantly more likely to report a successful transition to remote learning than principals of lower-ICSEA schools.

Pivot also asked respondents to rate the success of their school's transition to remote learning.[32] As shown in Figure 2 below, Victorian school principals from both ICSEA groups rated their transitions as more successful than did principals working in other states and territories. This may be related to Victoria being the only state to have had two distinct periods of widespread school closures. In addition, those in Victoria were more likely to lead a higher-ICSEA school.[33] For this reason, we analysed the association between transition success and ICSEA while controlling for being located in Victoria. This analysis revealed that, within our sample, principals at schools with an ICSEA score higher than 1000 were significantly more likely to report a very successful transition to remote learning (65.6%, n = 172) than those leading lower-ICSEA schools (36.1%, n = 53), which held even when the data was stratified to account for Victoria's longer lockdown period.[34]

Figure 2. Success of transition to remote learning by ICSEA and Victoria/non-Victoria
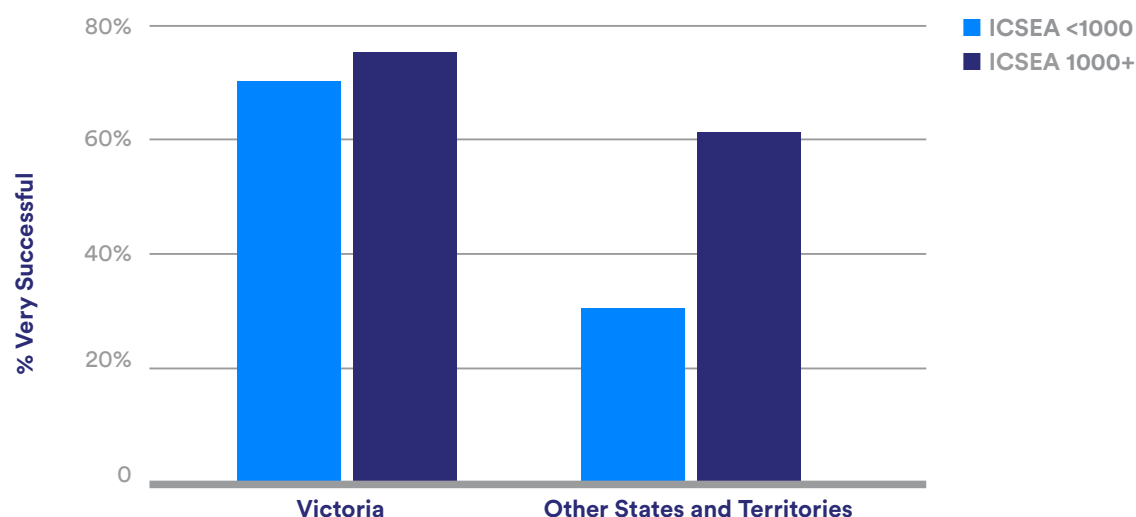

Note. Test statistics: χ^2_{MH} (1, N = 409) = 27.77, p < .001

This finding suggests the need for additional research to discover which factors associated with being lower-ICSEA (such as funding, staffing and technology access) were most challenging in the transition to remote learning. This will be essential as long as isolated COVID outbreaks (such as the February 2021 outbreak in Melbourne) force schools to periodically close. In addition, bushfires will be an increasing impetus for school closures in the future due to climate change.[35] In fact, some principals in our sample who reported closing their schools for bushfires in early 2020 discussed prioritising the use of technology and crisis planning in 2021. Despite the relatively small size of our sample, it is not surprising that we heard from principals affected by bushfires, as approximately one in six P-12 Australian schools were affected by the 2019-2020 bushfires.[36]

Principals of lower-ICSEA schools were significantly more likely to report insufficient technology access.

The lack of technological access in lower-ICSEA school communities may have been a key factor in the differences in transition success between higher- and lower-ICSEA schools. Given concerns about access to technology in low-income and remote areas found in previous studies,[37] we asked Australian principals how sufficient or insufficient their school's access to a variety of technological resources had been during the pandemic. In Figure 3, we display the percentage of principals who said their access was insufficient by school ICSEA level. As shown, for every type of technology, principals at lower-ICSEA schools were more likely to rate their school's access as insufficient. In every case, differences were statistically significant.[38]

Figure 3. Percentage of school principals who indicated their access to technology was insufficient by technology type and ICSEA

Legend: ICSEA <1000, ICSEA 1000+
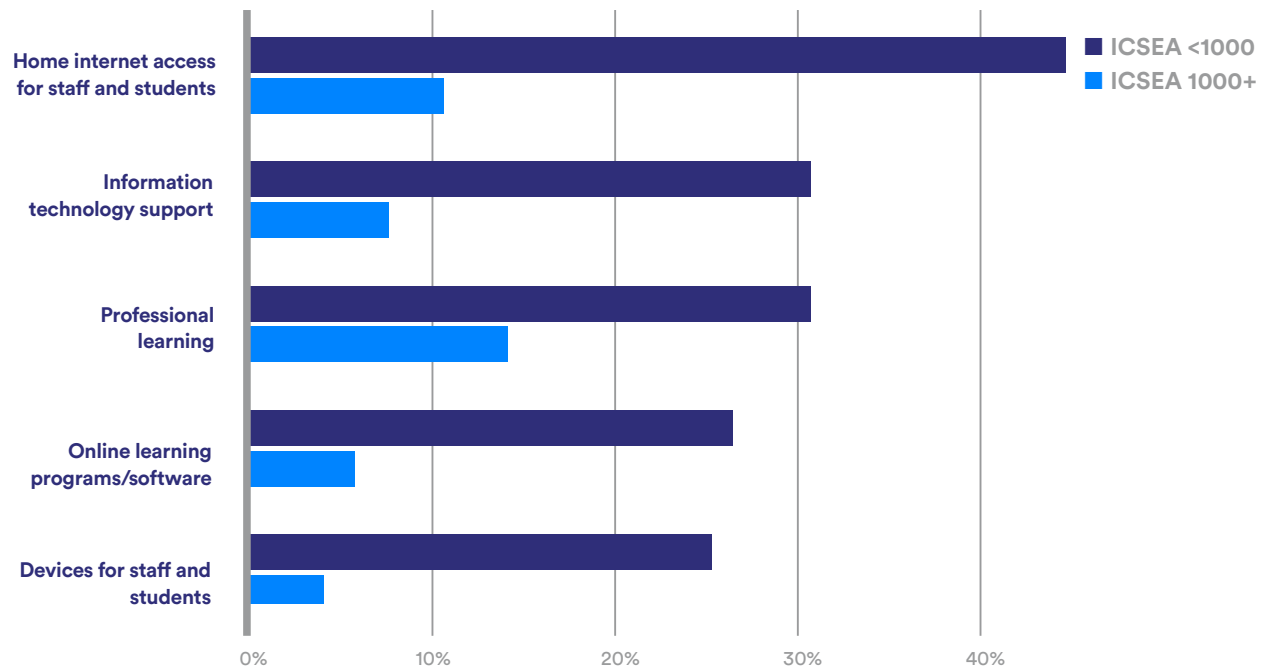
Note. $n_{<1000}$ = 141, n_{1000+} = 253

Equitable access to instructional technology has been a longstanding problem in Australia (as in other countries).[39] For example, even in the relatively populous and affluent state of New South Wales, more than 33,000 students lacked home internet access as of the 2016 census — and these students were disproportionately enrolled in government schools.[40] Nationwide, in 2016, Aboriginal and Torres Strait Islander students were more likely to be without internet access compared to their non-Indigenous peers.[41] The pandemic brought these disparities into stark relief and magnified the urgency to mitigate.
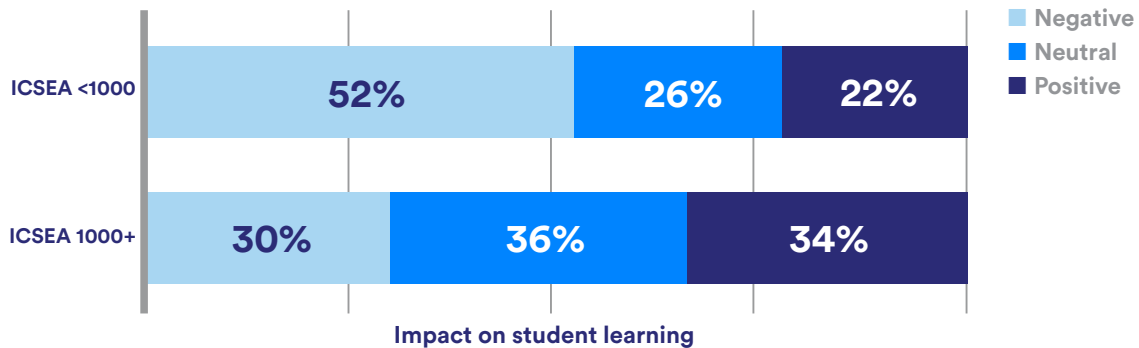
We saw evidence of this in our data. As one of the Aboriginal and Torres Strait Islander principal wrote: "Broadband is an enormous problem." This principal explained how they had advocated for devices from the Department of Education and received them, but had not received dongles for the devices. Compounding this issue was students' lack of home internet access. As a result, the principal reported: "I can only use a max of seven devices at a time (on a good day), so infrastructure is needed … [Broadband] is now in place, but it is not affordable for our community," illustrating the need for more robust digital inclusion efforts.

These findings echoed Pivot's earlier research. In April 2020, many educators who responded to Pivot's *Distance Teaching Survey* reported that they were preparing packets of physical materials for their students without internet and/or devices while also setting and delivering online instruction.[42] This made teachers' work far more complicated and contributed to their increased workloads. They also indicated remote learning had deleterious consequences for the learning experiences of children and youth who lacked access to technology, many of whom lived in economically vulnerable and/or remote communities.

Principals of lower-ICSEA schools were significantly more likely to report insufficient technology access.

Leaders rated the impact on student learning on a five point scale, from very positive to very negative. For this analysis, the different levels of positivity and negativity were grouped together. Figure 4 shows how principals rated the impact of COVID-19 on student learning.

**Figure 4. Perceived impact on student learning by ICSEA**

Impact on student learning

Legend: Negative, Neutral, Positive

	Negative	Neutral	Positive
ICSEA <1000	52%	26%	22%
ICSEA 1000+	30%	36%	34%

Note. $n_{<1000}$ = 132, n_{1000+} = 246

Principals from lower-ICSEA schools were significantly more likely to consider the impact of COVID-19 on student learning to be negative (52.3% vs. 29.6%).[43] However, it is worth noting that 22.0% of lower-ICSEA principals, and 34.8% of higher-ICSEA principals, actually rated the impact on student learning as positive. This suggests that despite the challenges faced, there were positive impacts on learning for a proportion of students in 2020. Some open-ended responses noted that the instructional techniques used during the pandemic allowed far more agency and cognitive load to be taken on by students. A principal at an urban independent school explained: "Students, older ones in particular, are capable of far more independence than previously thought." A few principals noted that remote learning was able to meet the needs of under-served students, with one principal of a large lower-ICSEA government school stating that they were surprised by "the number of disengaged students who re-engaged with the online option." Several principals noted that they would incorporate new instructional and communication techniques based on their perceived effect on student learning.

We also found significant socioeconomic differences in principals' estimates of students learning. Most principals estimated that students had learned 51-90% of the curriculum in the past six months, but principals at higher-ICSEA schools were twice as likely to report that students had learned 91-100% of the curriculum.

Figure 5. Estimated percentage of curriculum that students learned by ICSEA

% of curriculum learned by students

Legend: ICSEA <1000, ICSEA 1000+
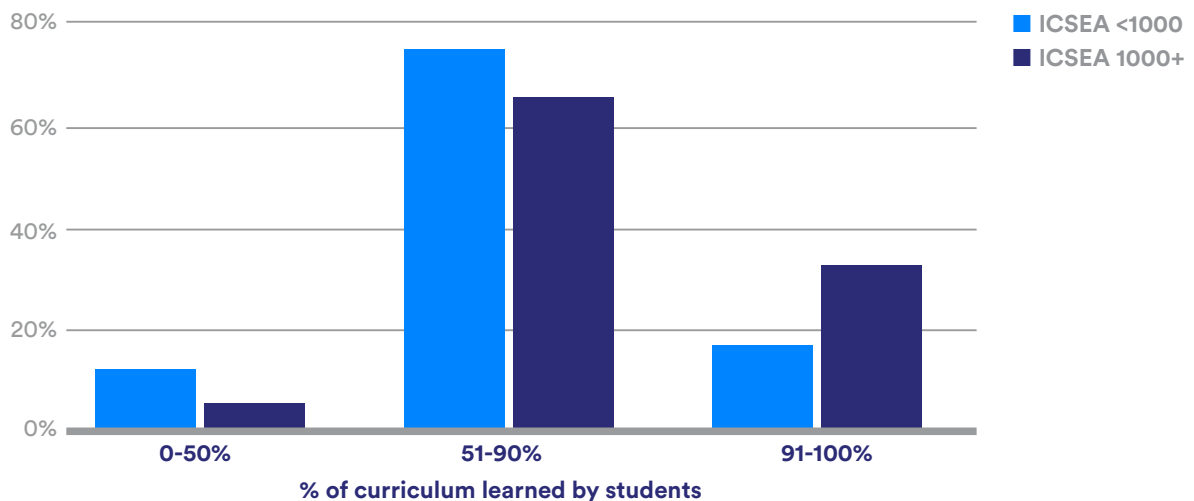
Note. $n_{<1000}$ = 128, n_{1000+} = 242

Further evidence emerged when we asked principals to rate their level of concern, from "not at all" to "a great deal" on a range of student outcomes. There were significant differences in principals' concerns about students' academic progress and engagement across lower- and higher-ICSEA schools. As shown in Figure 6, 21.4% (n = 28) of lower-ICSEA principals selected "a great deal" as their level of concern on academic progress compared to only 8.6% (n = 21) of higher-ICSEA principals. 19.8% (n = 26) selected "a great deal" as their level of concern with academic engagement, compared to 7.8% (n = 19) of higher-ICSEA principals.[44]

Figure 6. Percentage of principals indicating "a great deal of concern" for students' academic progress and engagement by ICSEA
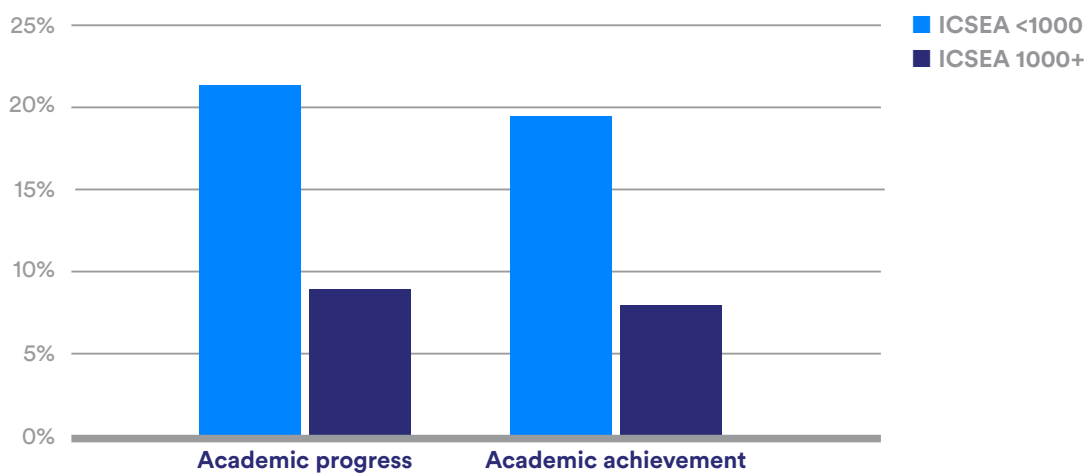
Note. $n_{<1000}$ = 131, n_{1000+} = 245

Supporting this finding, in the qualitative comments, many principals reported plans to address learning loss in the coming year. The principal of a lower-ICSEA government secondary school planned on running "additional clinics and workshops to try and address gaps in learning," while the assistant principal at a lower-ICSEA Catholic primary school stated that their school would focus on "the evidence of impact on student learning in order to make sure that the children are on track academically."

Impacts on teacher and student wellbeing

Pivot's *2020 Shifting Landscape of School Leadership Survey* asked principals about their impressions of the impact of the COVID-19 pandemic on teachers, students and families in their school communities. Overall, principals thought that the impacts of the pandemic on teachers were mixed, with positive impacts on professional practice, but negative impacts on teacher wellbeing. The risk of burnout, already high prior to the pandemic, appeared to be in danger of increasing. For students, principals thought social isolation, a lack of routine and physical activity and the limited availability of in-home support with remote learning were the biggest challenges.

Principals reported some positive impacts on teacher practice, but negative impacts on teacher mental health and work-life balance may be increasing the risk of burnout.

From the principals' perspective, the pandemic has had a mixed impact on their teachers, with positive effects on teachers' professional practice and negative effects on their personal lives. 65.7% (n = 249) of principals thought the pandemic had a positive impact on the quality of teachers' instructional practice. Further, a majority of principals perceived a positive impact on teachers' relationships with students (66.4%, n = 252) and principals (65.2%, n = 247). These perceived positive impacts did not vary significantly with the duration of remote schooling, school sector or ICSEA.[45] This suggests that

principals saw positive impacts on teacher practice in many school contexts. Future research into the nature of these positive professional changes and the mechanism underlying them could provide valuable insight for stakeholders attempting to carry forward promising practices that have emerged from the recent upheaval.

While principals saw improvement in teachers' professional work, they also saw negative effects on their teachers' wellbeing. As shown in Figure 7, many of the surveyed principals indicated that the pandemic had a negative impact on their teachers' mental health (81.2%, *n* = 308) and social-emotional health (76.5%, *n* = 289). These perceived negative health outcomes may have been related to teachers' work-life balance, which 59.1% (*n* = 224) of leaders thought was negatively affected by the pandemic.

Figure 7. Perceived impacts on teachers
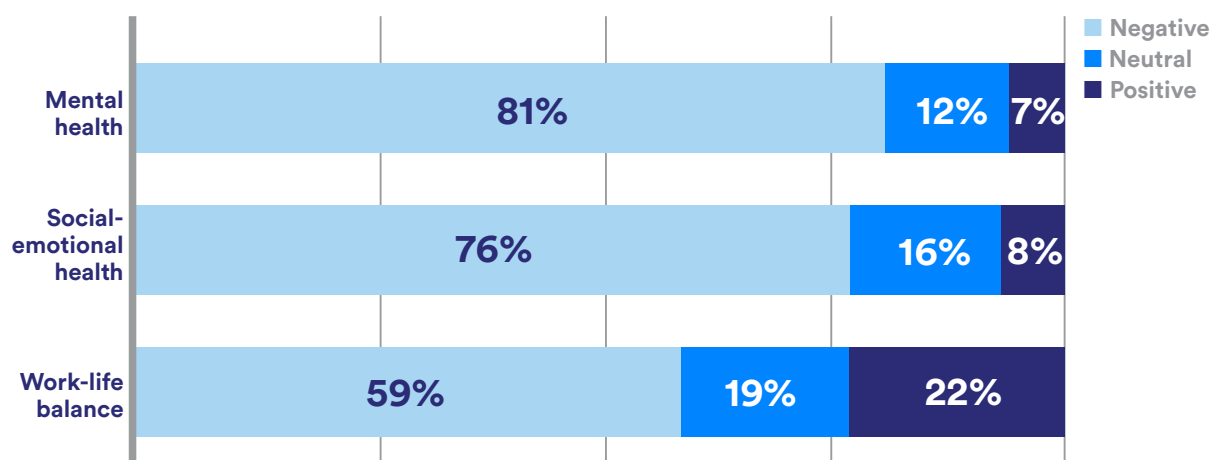
Note. n = 389

The qualitative comments support this finding, with principals noting a large increase in teacher workload. Several respondents pointed to the work teachers put in to learn new skills, with a principal at a Catholic secondary school stating: "Teachers went out of their way to learn new skills [and] upgrade for the benefit of all." Many leaders noted that members of the community could see how hard the teachers worked. These statements mirror the findings from teachers who responded to Pivot's survey in April 2020. At that time, 70% of teachers stated their planning time had increased with remote learning, with written responses referring to an "exponential" workload increase. As one teacher wrote: "We are exhausted."

Consistent with this, several principals expressed concern about how to address the mental health and wellbeing of teachers.[46] As a deputy principal from a higher-ICSEA school in Queensland said: "Often the problem with staff wellbeing is that we can see that they are struggling mentally but they cannot. Being able to instigate a conversation with someone about their mental health is difficult." Principals also noted the need for pragmatic tools and interventions that focus on teachers' wellbeing. As one principal at a primary school in Victoria aptly said: "Without [wellbeing], [teachers] are unable to support our students and families."

School leaders' concerns about teacher wellbeing are well-founded. Multiple studies indicate that teacher wellbeing, or lack thereof, is a strong motivating factor for leaving the profession. Conversely, positive teacher wellbeing is linked to teacher retention, job satisfaction, student performance and student wellbeing.[47] Workload is closely linked to teacher wellbeing, with heavy workload being one of the primary reasons teachers leave the profession. Australian teachers were already working longer hours, both in and out of the classroom, than their peers in other countries.[48] A recent survey of Australian teachers found that three-quarters of respondents did not find their workload manageable, with many saying it was a factor in wanting to leave the profession.[49]

Higher-ICSEA principals were more concerned about students' social isolation, while lower-ICSEA principals worried more about students' lack of routine and access to technology.

When we asked principals about the biggest challenges facing students during the pandemic, there were also statistically significant differences in the responses of principals from lower- versus higher-ICSEA schools. As shown in Figure 8, a significantly higher proportion of leaders at higher-ICSEA schools selected a lack of face-to-face contact with friends (71.4% vs. 46.9%)[50] and fewer social activities (61.6% vs. 49.2%)[51] as among students' top three challenges than leaders at lower-ICSEA institutions. The data also suggested that a lack of physical activity (35.5% vs. 26.2%) could have been more of a concern for students at higher-ICSEA schools.[52]

Figure 8. Top three challenges facing students during the pandemic by ICSEA
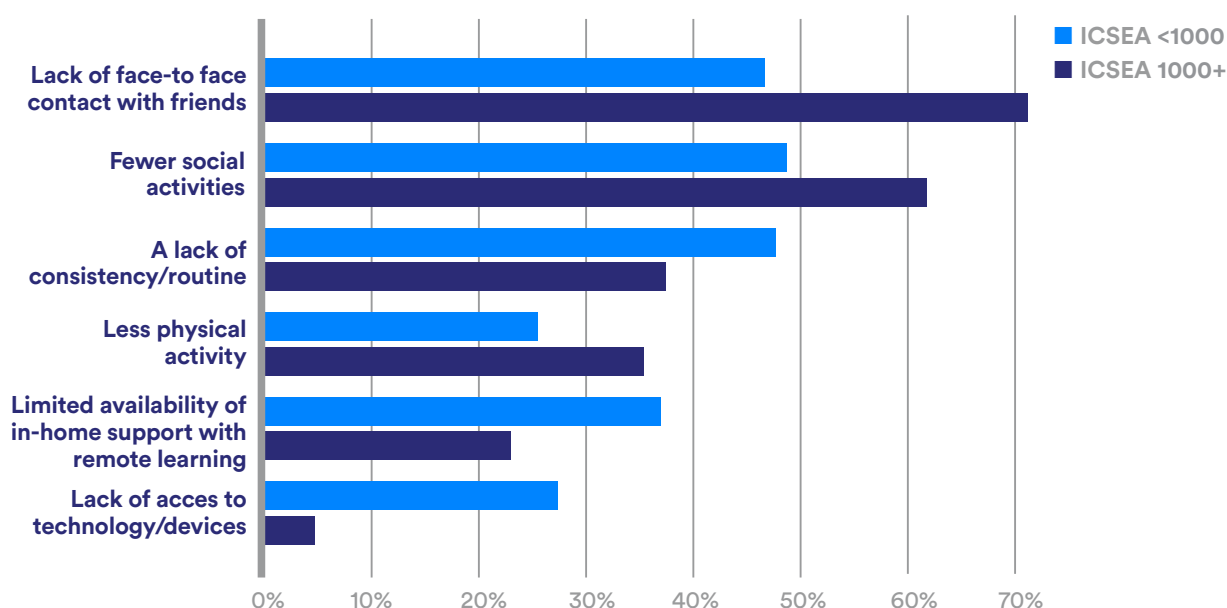
Note. Participants could select up to 3 options; $n_{<1000}$ = 130, n_{1000+} = 245

Less selected categories (all < 20%) included: academic loss, fewer economic resources, housing insecurity, food insecurity, concerns about health and safety and concern for their family. Figure 8 also illustrates how, at lower-ICSEA schools, principals were significantly more likely to believe that a limited availability of in-home support with remote learning (36.9% vs. 22.9%) and lack of access to technology (28.5% vs. 4.9%) were among the top three challenges facing students.[53] Multiple open-ended responses noted the lack of technology in students' homes. A leader at a lower-ICSEA government school in an urban area said that remote learning showed her:

> *How many [students] didn't have access to the internet at home and didn't have the technology to support learning. One computer often shared by the whole family if they had one and kids were using their phones.*

These findings were consistent with those from Pivot's survey in April 2020. As we wrote in July 2020,[54] it is critical to note that fewer adults in lower-income families could work from home during the pandemic compared to adults in middle- to upper-class families, as many low-wage workers provide essential services.[55] This may also be a factor in our finding that a higher proportion of principals at lower-ICSEA schools may have thought that lack of consistency and routine was a pressing challenge for their students compared to principals at higher-ICSEA schools (48.5% vs. 37.6%).[56]

Leaders who engaged in more advocacy as a result of the pandemic were more likely to work in schools with higher proportions of students with disabilities.

We asked principals about how their provision of support services to the larger school community had changed during the pandemic, including the provision of advocacy. Our analysis revealed that there were statistically significant differences in the change in the degree of advocacy in which principals engaged depending on the proportion of their students with identified disabilities. Figure 9 shows how advocacy was greater among principals whose schools had more students with disabilities.

Figure 9. Change in principal advocacy by percentage of students with disabilities
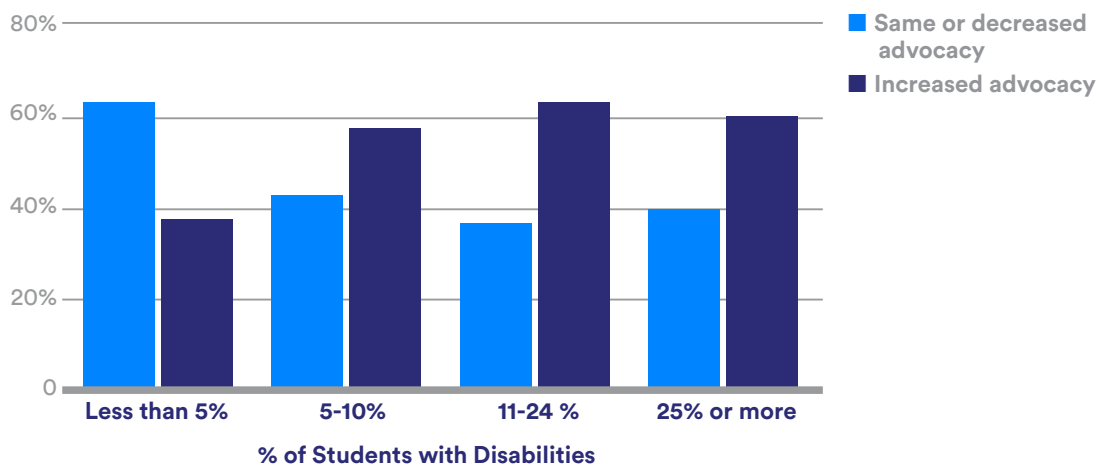
Note. n = 391

This finding suggests the need for additional research to discover which factors were associated with greater advocacy. Although all students faced challenges during the pandemic lockdown, students with disabilities confronted greater barriers; the shift to remote learning was accompanied by reductions in key supports and normal service provision for these students across all educational sectors.[59] Recent research in the field has indicated that students with disabilities experienced difficulties with: accessing curriculum and learning materials; meeting with educational staff; engaging with online learning without significant modifications; and feeling isolated from their peers.[60] Although some principals found that the remote format enabled learning for students with disabilities, most found that the change exacerbated existing systemic difficulties.[61] Thus, principals in schools with a high proportion of students with disabilities may have needed to be more active in their advocacy and support for their school community to be able to meet the needs of all students.

Impacts on the leadership practices of principals

A significant body of research indicates the importance of leadership in student performance, instructional leadership and family partnerships.[62] Principals' attitudes and values influence school priorities and the mechanisms they use to meet them. The effectiveness of school programs is shaped by principals' ability to seek out new ideas and truly listen to the needs of their communities.[63] Principals become even more important when schools are in crisis; they need to use existing resources in new ways, swiftly develop new skills and evaluate their conceptions of themselves as leaders.[64] Responses to our open-ended questions suggested that the pandemic gave principals insights into how their schools operated and what they would like to keep, change or leave in the past. A principal of a higher-ICSEA independent school in Tasmania explained:

> *I was relatively new to the role at the start of the pandemic, and it allowed me to see the strengths, and weaknesses, of the school laid quite bare - this has been invaluable for the strategic planning process that we engaged in in the second half of the year.*

A survey of principals, therefore, provides insight into both how schools operated during the pandemic and where schools should go from here. In this section, we present our findings on how the pandemic has shifted the landscape of school leadership in Australia.

Australian school principals have experienced an increase in their workloads, but no corresponding decline in job satisfaction.

As shown in Figure 10, of the principals who responded to our survey, a staggering 97.2% (*n* = 282) reported that their workloads had increased as a result of the COVID-19 pandemic. Only seven of the 387 people who answered this question said their workloads decreased. Despite the near universal increase in workloads, only 30.3% of respondents (*n* = 117) reported that the COVID-19 pandemic had contributed to a decrease in job satisfaction. In fact, 16.6% (*n* = 64) said their job satisfaction had increased compared to their satisfaction prior to the pandemic.

When we asked respondents about their future plans, only 14.5% (*n* = 56) said that the pandemic had made them less likely to continue working in principalship in the future. A large majority (77.0%, *n* = 298) said their likelihood of continuing to work in principalship was unchanged. Notably, there were no statistically significant differences in reported changes in workload, job satisfaction or future plans among principals in schools that were more or less affected by closures or among principals in higher- versus lower-ICSEA schools.[65]

Figure 10. Changes in leader workload, job satisfaction, and likelihood of continuing in school leadership
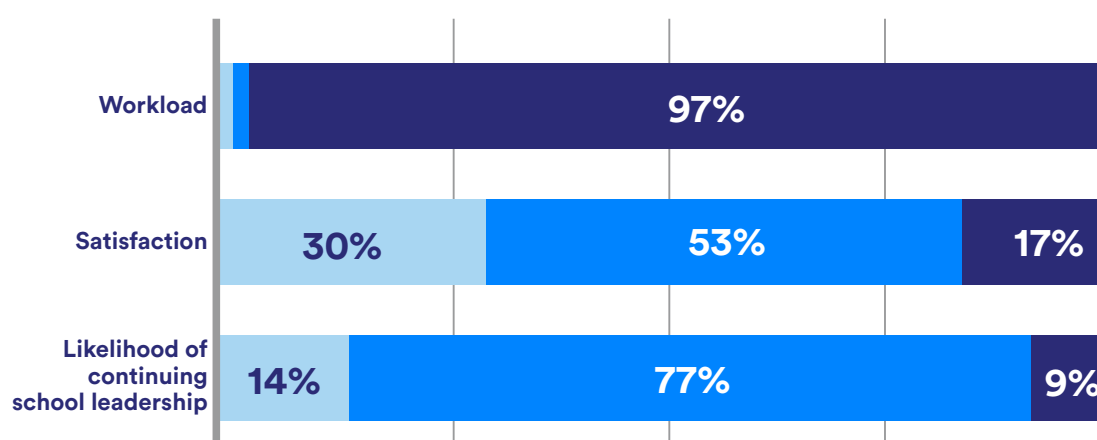
Note. n = 398

The majority of principals (72.9%, *n* = 282) characterised their workload increase as "significant," compared to 24.3% (*n* = 94) who characterised the increase as "slight." While there was a near consensus that the pandemic had increased workload, the expressed plans of a majority to stay in the profession was a probable indicator of principals' deep commitment to their students and school communities.

The prevalence of increased workload for principals raises the spectre of the risk of burnout — typically defined as a state of emotional exhaustion caused by workplace stress that leads to diminished feelings of accomplishment.[66] Burnout is associated with poorer job performance, reduced job satisfaction, lower motivation and poorer physical and mental wellbeing.[67] Principal burnout was already a serious concern prior to the pandemic. The 2019 *Australian Principal Health and Wellbeing Survey* showed that one-third of principals in Australia were at risk of burnout and other stress-related health problems.[68] This has been linked to evidence that the work of principals was already more demanding than average[69] and that the demands of the job have been intensifying in recent years.[70] Hence, the demands of the pandemic on principals have added to an already burdensome workload.

While many principals expressed satisfaction with the gratitude of their school communities, this was regularly explicitly or implicitly linked to the efforts the schools were making in teaching and communication. A principal of an independent school in New South Wales described the mixed blessings of community engagement, writing that while families wanted to be involved, they also "wanted communication — frequent and personal." Many responses highlighted the amount of support and communication — including the additional work, staff and resources needed for remote learning to be effective. An assistant principal at a lower-ICSEA government school in Western Australia voiced the stress of supporting others during a crisis:

> I will look at an initiative to look after myself better since my employer does not seem to care how much this has impacted [me] or how many more hours I have worked since or how much time I have put into seeing that everyone else including parents and guardians are okay.

Although the proportion of principals in our study who were considering leaving school leadership was low, further intensification of principals' work combined with the emotional stress of leading during a crisis creates a potentially unsustainable situation. More research is needed to understand how the pandemic may be exacerbating or changing the risk factors for leader burnout, as well as what the long-term ramifications for the labour market may be.

Communication and crisis planning were the most helpful skills for leading schools during the pandemic.

Research has shown that school leadership during a crisis requires not only the swift mobilisation of existing plans and resources, but also the flexibility and confidence to alter them as needed.[71] Similarly, remote learning requires new forms of communication and collaboration with students, teachers and families to meet urgent goals.[72] In 2020, the vast majority of Australian school principals supervised one or more transitions to and from remote learning while leading their school communities through an ongoing global crisis. This required principals to draw upon a somewhat unfamiliar set of skills and develop new competencies in response to rapidly changing circumstances. Several principals noted that they were surprised with how swiftly they were able to change, with one principal at a remote government school saying: "I knew we could innovate, just not how quickly."

In order to better understand which skills principals relied on most, we asked survey respondents to choose the three skills[73] that they found most helpful for their leadership practice during the pandemic. Across our sample, communication (93.7%, *n* = 369) and crisis planning (62.2%, *n* = 245) were the two most frequently selected skills. As shown in Figure 11, a greater proportion of principals at higher-ICSEA selected these skills. The difference was not statistically significant,[74] however, suggesting that the fundamental nature of communication and crisis planning during a pandemic cuts across socioeconomic lines.[75]

Figure 11. Most helpful leadership skills by ICSEA
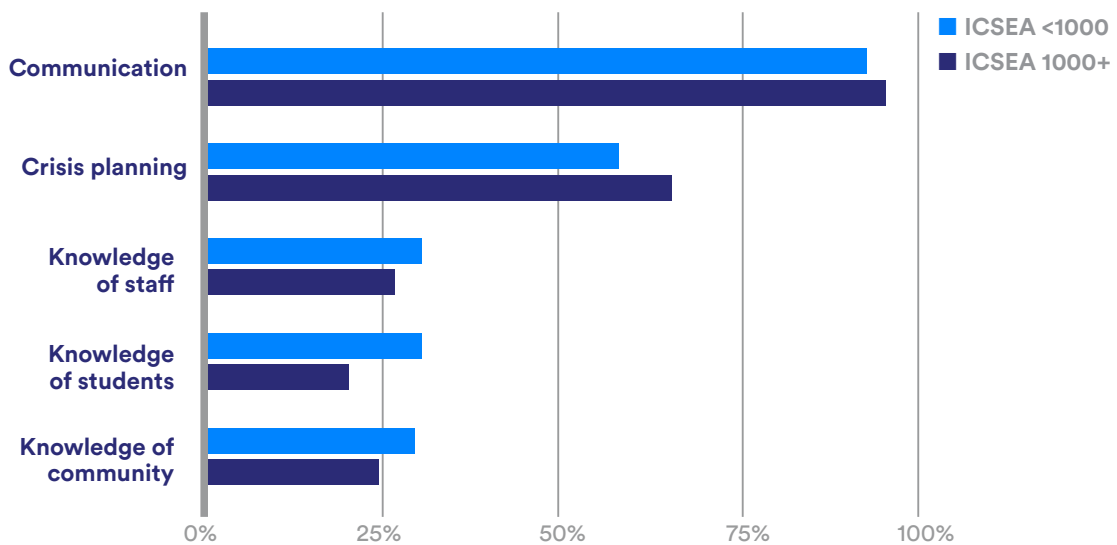
Note. Participants could select up to 3 options; $n_{<1000} = 133$, $n_{1000+} = 250$

Consistent with these data and the research literature, leaders from across all sectors spoke about the heightened importance of communication during the pandemic in their open-ended responses. As a principal from a major city in Western Australia said: "Communication is the key." Similarly, the principal of a lower-ICSEA school in New South Wales reflected: "Relationships are even more important in a crisis." One principal of a Catholic school in South Australia expanded on this theme, advising that it was critical to communicate "on a regular basis, preferably in-person or on the telephone." This principal aimed to express "empathy" and the goal of "working together" in their communications. Another principal who worked at a government secondary school in Queensland stressed the importance of consistency, honesty and frequency in communication with the community.

Colleagues were the most useful source of professional support for principals during the pandemic. Newer principals were less likely than more experienced leaders to rely on professional associations.

The *2020 Shifting Landscape of School Leadership Survey* also asked respondents which sources of professional support were most useful in supporting their leadership during the pandemic.[76] As shown in Table 5, almost all principals (91.3%, *n* = 356) reported relying on their colleagues for professional support during the pandemic. This response was selected more than twice as frequently as the next most common useful source of professional support.

Table 5. Most useful sources of support for principals

Supports for principals	
Colleagues	91.3%
Professional association	39.7%
The governing body that employs you	39.2%
School/council board	24.6%
Mentor/coach	20.0%
External supports	3.9%

Note. Participants could select up to 3 options; *n* = 390

This is a positive sign, as collegial support among principals can cultivate a sense of community, reduce turnover and build bonds that enhance motivation and commitment.[77] School leaders' relationships can also facilitate school improvement, particularly in under-served communities, as they build networks of trust, information and advice.[78] Principals' collegial relationships are particularly important for learning new skills and ideas (as required in a pandemic), which are key aspects of instructional improvement, community relationships and family participation.[79] In addition, collegial support can help combat feelings of isolation, which is a common challenge[80] for principals that can contribute to new principal burnout and trouble staffing rural schools.[81]

Less experienced principals were significantly less likely than their more experienced peers to choose a professional association as one of their most useful sources of support (33.5% vs. 48.6%).[82] Given these findings, professional associations may wish to consider developing plans for outreach to their less experienced members to determine how best to provide support, and to conduct a needs assessment in order to further understand whether and how to differentiate their supports and resources. Although only 20.0% (*n* = 78) of respondents said they received support from a mentor or coach, this likely reflects the relatively high level of experience in our sample.[83]

Principal plans and priorities for the 2021 school year

A key purpose of Pivot's *2020 Shifting Landscape of School Leadership Survey* was to gauge principals' priorities for the coming school year, and to establish what kinds of investments and assistance would best support their goals. Listening to practitioner voices (in this case principals) is a core value in Pivot's approach to research, as practitioners are best positioned to improve practice and student outcomes. School principals' expert, contextualised knowledge about the assets and needs of their students is an important source of information for policymakers that is often overlooked.[84] Further, principals are experts on their own professional learning needs.[85] In this section, we aim to elevate the voices of principals across Australia and present their perspectives on how the education sector can support their work going forward.

Principals' top three priorities for investment, across ICSEA levels and sectors, were related to school staffing.

When Pivot asked principals to select their priorities for investment in 2021, the top three (across ICSEA levels and sectors) were related to school staffing. We followed up by asking principals which staff roles were most important for investment. As shown in Table 6, the largest proportion of principals (75.6%, *n* = 251) thought that the role of teachers was most important for additional investment,

followed by social workers/school psychologists (72.3%, *n* = 240). There were no statistically significant differences between the preferences of lower-ICSEA and higher-ICSEA principals, but of interest were the differences in preference for mid-level leaders (25.2% lower-ICSEA vs. 32.4% higher-ICSEA) and educational support staff (55.0% lower-ICSEA vs. 44.6% higher-ICSEA).[86]

Table 6. Principals' opinions on the most important roles for staffing investment

Staff roles	
Teachers	75.6%
Social workers/psychologists	72.3%
Education support staff	47.9%
Middle leaders	31.0%
Facilities and cleaning staff	14.2%
Office administrators	7.8%
School-based nursing	6.9%

Note. n = 332

All of these were more frequently selected than facilities and cleaning staff, office administrators, and school-based nursing staff, which were selected by fewer than 15% of respondents. One Catholic principal in South Australia said they would like to see more family and community relationship officers, more mentors to support teaching staff and more support staff to manage administrative work in compliance and risk. A principal at a government school in Western Australia highlighted the risk of not having more support staff, saying that in 2021 "extra-curricular activities will be reduced to reduce workload." The principal of a Catholic secondary school in Queensland noted that "the extra time for planning for home learning online" provided teachers with the dedicated time necessary to "create new mediums of delivery and differentiation." This principal suggested adding additional paid preparation time for teachers to the school calendar.

Access to technology was a higher priority for lower-ICSEA principals relative to principals in higher-ICSEA schools.

As discussed above, lower-ICSEA schools need significantly more support with technology access and resources for teaching and learning than schools in more advantaged communities. Principals' plans and priorities for 2021 reflected this disparity. When we asked principals to select three top priorities for investment in 2021, principals at lower-ICSEA schools more frequently selected investment in technology among their top three priorities for investment in 2021 compared to their counterparts at more affluent schools. As shown in Table 7, the proportion of lower-ICSEA principals prioritising technology was approximately three times higher than the proportion of principals at higher-ICSEA schools. This difference was statistically significant.[87]

Table 7. Percentage of principals prioritising technology by ICSEA

Priority for investment	ICSEA <1000	ICSEA 1000+
Devices for students	37.7%	11.4%
Internet for students	37.7%	13.0%

Note. $n_{<1000}$ = 130, n_{1000+} = 237

Digital pedagogy and student wellbeing are the top priorities for preparing for potential school closures in 2021 and beyond.

The two most frequently selected priorities for preparing for potental closures were: training in digital pedagogy (80.0%, *n* = 304) and training in supporting student wellbeing (74.0%, *n* = 281). These findings aligned with those from Pivot's *Distance Teaching Survey* in April 2020. The difference in the proportions of lower-ICSEA and higher-ICSEA principals who prioritised training in digital pedagogy was not significantly significant. However, a significantly higher percentage of lower-ICSEA principals prioritised technological upgrades (60.0% lower-ICSEA vs. 36.1% higher-ICSEA), while a significantly larger proportion of higher-ICSEA principals prioritised training in supporting student wellbeing (66.2% lower-ICSEA vs. 77.6% higher-ICSEA).[88]

The qualitative comments offered insight into plans and potential professional learning needs around digital pedagogy. About one in six of the people who chose to answer the open-ended question about their plans for next year (*n* = 36) referred to developing permanent options for blended and/or remote learning at their schools. These principals saw such plans as a way to individualise schooling for non-traditional students. One principal of an outer regional Catholic school said: "We will be able to offer a much more flexible learning journey for students who do not fit the norm: those with physical disabilities, or mental illness or family trauma." Several principals also spoke about leveraging technology in order to flip instruction in the classroom. (In a flipped or inverted pedagogical model, students prepare for class by engaging with instructional content outside of class and then engage in active, often collaborative, learning challenges in class).[89] As one principal of a secondary school explained:

> [We are planning] a greater shift to online learning during face-to-face teaching. This will facilitate students accessing learning at their own pace and shift the role of the teacher to one where clarification and expansion of concepts take place in the class. This will further value the expertise of staff, time of students and increase the depth of learning.

The benefits of using technology to deliver more individualised learning have been identified by several researchers, most notably John Hattie in *Visible Learning*.[90] Three of the top ten influences on student achievement identified through his meta-analyses (formative evaluation, feedback and response to intervention)[91] can likely be enhanced or more easily delivered through technology.

Principals prioritised wellbeing initiatives in response to an overwhelming perception that the pandemic had negatively impacted students' and teachers' mental health and wellbeing.

Not surprisingly, a large majority of principals (79.5%, *n* = 302) thought the pandemic's impact on students' mental health and wellbeing had been negative. This mirrored leaders' perceptions of the impact on teachers' mental health and work-life balance. Notably, these perceptions did not significantly differ by the length of time spent in remote learning.[92] Research findings from others in the field offer insight into some of the potential drivers of negative mental health and wellbeing outcomes. For example, during the pandemic, many vulnerable students lost access to school-based educational, social and mental health

services, as well as school breakfasts.[93] These losses accompanied the increased stresses of widespread job losses and closure of local public institutions.[94]

Our qualitative data suggested that many Australian principals are focused on wellbeing as the 2021 academic year begins. As one principal of a Catholic school wrote: "wellbeing is an enabler of learning." Approximately a quarter of respondents to the open-ended question about priorities for 2021 (n = 66) mentioned student wellbeing. Many of these respondents described planning "whole-school wellbeing initiatives" for 2021 that targeted mental health and resilience for staff and students. In the classroom context, principals' planned strategies included social and emotional learning, which one principal of an independent primary school described as "just as important as academic learning as this is what has gotten children through tough times of COVID 19." Several principals also mentioned regular tracking of student wellbeing through ongoing, weekly "data capture," as well as close monitoring of assignment submission as an indicator of student engagement.

Summary of findings

The impacts of the COVID-19 pandemic will be felt for years, perhaps decades, to come especially in Australia's economically vulnerable and historically-marginalised communities. Although many schools have regained some semblance of normalcy, principals and school communities face ongoing uncertainty. As the February 2021 coronavirus lockdowns in Victoria and Western Australia and bushfires in Western Australia illustrate, schools may experience unexpected and intermittent closures for the foreseeable future. Pivot's analysis of its 2020 Shifting Landscape of School Leadership in Australia survey highlights how the pandemic has reshaped the experiences of students, teachers and school principals across Australia. This timely research offers policymakers and sector leaders valuable insights for their ongoing mitigation planning. The key findings presented in this report include the following:

- Schools moved to provide increased levels of mental health support, advocacy and food support to their communities.

- Principals reported stronger relationships with teachers, families and students, as well as increased family engagement.

- The majority of principals faced increased workload, but a minority reported decreased work satisfaction. Very few reported an increased likelihood they would leave school leadership.

- Principals thought that communication and crisis planning were the most important skills for leading during the pandemic.

- For professional support, principals relied most on their colleagues. Less experienced leaders were less likely to rely on professional associations than were leaders with more than 20 years of experience.

Notably, there were very few significant differences in principal responses associated with the duration of remote learning. The exception was transition success, which was most successful in Victoria, where responses may have been more positive because principals had an opportunity to learn from their first lockdown before transitioning into a second. However, many significant differences in the responses of principals at higher-ICSEA versus lower-ICSEA schools emerged. These included:

- After controlling for the duration of remote learning, principals in lower-ICSEA schools were more concerned with access to technology, while principals in higher-ICSEA schools were more concerned with student social isolation.

- Higher-ICSEA schools were more likely to have covered almost all of the school curriculum, with a third of principals stating impact on student learning of remote schooling was positive compared to only a fifth of lower-ICSEA principals.

- In terms of challenges facing students, higher-ICSEA principals were more concerned with social contact and physical activity, whereas lower-ICSEA principals were more concerned with lack of routine and in-home support for remote learning.

Extant problems

Considered in the context of extant literature, our findings suggest that many of the ICSEA-related disparities in our data may have stemmed from pre-existing problems and inequities in the Australian educational system, and that the pandemic exacerbated them. Below, we provide some context before presenting Pivot's policy recommendations.

Before the pandemic, school staffing was already a concern.

There were already concerns about teacher shortages in 2020. These worries were particularly acute for rural and socioeconomically disadvantaged schools that have long had difficulty attracting staff.[98] In 2020 before the pandemic, lower-ICSEA schools already had disproportionately high rates of teacher turnover and burnout, as well as lower than average levels of teacher experience.[99] In addition, lower-ICSEA schools had lower student attendance and academic performance relative to more affluent schools.[100]

Disparities in digital inclusion predate the pandemic.

Disparities in technological access also predate the pandemic. Gaps in broadband infrastructure in Australia disproportionately affect low income communities and rural, regional and remote areas.[101] Due to a history of ongoing marginalisation, many of these areas are home to Aboriginal and Torres Strait Islander communities.[102]

Inequity in technological access extends within the school building as well. According to an OECD analysis of the Program for International Student Assessment (PISA) data, Australian principals with the socioeconomically disadvantaged students had less positive views of their schools' access to technology than their peers at more socioeconomically advantaged schools. They were less likely to state that they had sufficient technology, technological assistance or internet bandwidth to serve their students. Fewer principals at disadvantaged schools stated that their teachers were able to incorporate digital technology effectively or had access to professional development about technology use.[103]

Student wellbeing has been a growing area of concern for several decades.

Over recent decades, Australian policymakers and educators have expressed increasing concern about child and youth wellbeing, particularly in terms of economic security, social inclusion, and mental health.[104] As of 2017, 16.9% of Australian children lived in poverty.[105] Between 2010 and 2014, about a quarter of school-aged young people reported experiencing regular bullying and social exclusion.[106] In addition, rates of psychological distress and death by suicide among Australians under age 18 increased between 2007 and 2016.[107] Suicide rates among Aboriginal and Torres Strait Islander persons are substantially higher than those among non-Indigenous Australians due to challenges around minoritised status, discrimination, economic marginalisation and health care inequities.[108]

There have been equity gaps in the Australian school system for decades.

Long-standing equity gaps exist in school resourcing and student outcomes.[109] Research has found a persistent link between family socioeconomic status and Australian student performance, including entry into tertiary education and labour market transitions.[110] These associations contribute to geographic and ethnic disparities in outcomes. There are significant differences in standardised test achievement between students in remote versus metropolitan areas[111] and between Indigenous and non-Indigenous students.[112] School socioeconomic profiles also contribute to equity gaps, regardless of family socioeconomic status.[113]

Pivot's recommendations for policymakers and sector leaders

Pivot's research team listened to the many voices of the principals who graciously answered our survey and then considered our findings in the light of extant scholarly literature to design a series of policy recommendations for policymakers and sector leaders.[114] Despite the unprecedented nature of the COVID-19 crisis, we recognise that many of the pandemic's negative consequences represent an exacerbation of longstanding inequities in Australian education. The Grattan Institute estimated that the educational equity gap would grow at three times the typical rate during the pandemic. The authors also noted that the existing gap was 10 times the size of any gap caused by the pandemic.[115] Thus, Pivot has developed a series of policy recommendations aimed not only at addressing the immediate COVID-related problems that persist a year into the pandemic, but also at forging a more equitable future for the Australian educational system. In a sense, we see our recommendations as "future-proofing" against further disruption to normal schooling, which is no longer hypothetical. Whether it be school shutdowns due to pandemics, bushfires or other natural disasters, Australian schools need to be equipped with the tools, strategies and support to ensure all students have the same opportunities to learn. In addition, future-proofing aims to disrupt pre-pandemic disparities that have contributed to the equity gap. Table 8 below summarises our recommendations for now (i.e., short-term policy changes) and for future-proofing.

Table 8. Summary of Pivot's policy recommendations

Recommendation	Now	Future-proofing
1. Prioritise educator wellbeing	• Strategically expand school staffing • Provide additional paid pedagogical planning time for teachers • Support teacher mental health and work-life balance through evidence-based interventions and broader organisational change	• Follow-through with long-term, high-quality training for fast-tracked staff • Restructure teachers' work • Create dedicated staff positions within schools to manage teacher wellbeing
2. Expand digital inclusion	• Conduct a nationwide technology audit • Provide devices and hotspots for students and teachers • Upskill teachers in digital pedagogy • Expand culturally responsive and interactive options for digital curricula	• Continue and expand effective blended/hybrid models of schooling • Design innovative approaches to online/blended instruction that engage and support vulnerable students • Invest in technology infrastructure
3. Mitigate learning loss among vulnerable students	• Create non-digital solutions for areas without broadband infrastructure • Deliver inclusive services for students with disabilities across all schools • Invest in tutoring support	• Provide equitable access to early childhood education, extracurricular activities, and workplace learning • Support schools to implement comprehensive frameworks for early detection of needs and tiered interventions for vulnerable learners

Recommendation	Now	Future-proofing
4. Care for the wellbeing of all students	• Conduct wellbeing needs assessments • Connect principals with evidence-based tools for monitoring and supporting wellbeing • Increase access to school-based mental health professionals • Implement trauma-informed pedagogical practices • Encourage culturally responsive and sustaining practices • Expand Indigenous Education Worker programs	• Dedicate funding streams for assets-based, whole-school approaches to school climate and wellbeing • Leverage public-private partnerships to increase system capacity for wellbeing initiatives • Dedicate funding streams for wellbeing initiatives • Build a recruitment and preparation pipeline for Aboriginal and Torres Strait Islander principals and teachers
5. Design and build infrastructure for change	• Conduct crisis planning • (Re)design COVID-19 and bushfire safety protocols • Implement climate adaptation measures for existing school buildings	• Invest in pandemic- and climate-proof school infrastructure • Revise the *National Climate Resilience and Adaptation Strategy* to include explicit attention to schooling • Launch a cross-sector, cross-industry coalition for educational equity

Together, these recommendations are aimed at ameliorating the negative consequences of COVID-19 on students and educators, particularly those in historically-marginalised and economically vulnerable communities. In addition, these recommendations seek to reimagine extant educational systems and structures with the following goals: closing the equity gap in Australian education; advancing economic, racial and climate justice; and forging a future in which all Australian children and youth are able to flourish.

1. Prioritise educator wellbeing

Our analysis illustrates the necessity of prioritising educator wellbeing in the 2021 school year. Many principals indicated a need for further investment in staffing. In the short term, Pivot recommends that policymakers temporarily expand alternative pathways into the classroom (e.g., emergency licensure) for teachers and support staff.[116] Increasing staffing will help distribute educators' workloads and improve work-life balance. Over the long term, it will be essential to provide personnel who enter schools via alternative pathways with long-term, comprehensive training to ensure a high quality of instruction and classroom support. Sector leaders can also consider providing teachers with compensated time to plan and prepare for potential shifts to online and flexible learning.

Additionally, as discussed more in our fourth recommendation, whole-school wellbeing should be a priority for principals' professional learning in 2021. Recent systematic reviews have shown that mindfulness interventions for teachers can be effective for reducing psychological distress and improving mental wellbeing.[117] Similar results have been found for improving social support (e.g., circles of practice) and psychoeducational interventions designed to improve knowledge about stress and wellbeing.[118] Principal professional learning could support leaders in implementing such interventions in their schools.

Additional organisational changes in schools as workplaces may further support educators wellbeing. For example, supporting teacher autonomy is associated with increased teacher job satisfaction and a reduction in teacher burnout; similarly, high-quality mentoring and positive staff relationships may also contribute to educator wellbeing.[119] Pivot encourages sector leaders to consider ways to support school principals in expanding autonomy and cultivating positive collegial relationships. Professional learning for

principals around mentoring may be a worthwhile investment. Further, policymakers and thought partners should consider ways to reimagine the structuring of the teaching role in order to reduce the administrative burden on teachers.[120]

2. Expand digital inclusion

Digital inclusion, a key part of closing the equity gap, is a three-part strategy for closing the digital divide through attention to access to technology, affordability and digital skills.[121] Although progress has been made in expanding digital inclusion, it is still a problem one year into the pandemic.[122] Despite efforts across the country to address the issue,[123] our data show that the digital divide persists. School leaders are reliant on solutions from policymakers and industry. They can support their staff in upskilling in digital pedagogy and perhaps, in more advantaged areas, make small investments in technological devices and connectivity. However, the scale of investment needed to make technological access equitable across Australia necessitates policy solutions.

In the short term, Pivot recommends that policymakers conduct a nationwide audit of access to technology and the internet as soon as possible. Including large-scale school and family surveys with representative samples in this process can help policymakers assess the progress that has been made on access and affordability, and make plans to completely close remaining gaps. After the audit, any student or teacher who does not have a device or adequate internet connectivity should be provided with a device or dongle. As Australia hits the one-year mark in the pandemic, continuing disparities in access to digital technologies among students and teachers in low-income and regional, remote and rural (RRR) areas are unacceptable. These technologies are necessary for remote learning experiences that are interactive, and interactivity is associated with enhanced achievement.[124] The continued absence of technological access in vulnerable communities will contribute to the expansion of the equity gap as long as it remains unaddressed.[125]

In the short term, policymakers can also support schools in upskilling teachers in digital pedagogy (i.e., developing teaching competencies unique to digital environments).[126] Our data indicated that this is a top priority for principals in 2021, and other studies have also demonstrated a need for it.[127] To complement this, professional learning for principals this year should include offerings around leading for digital instruction. In addition, sector leaders should take swift steps to expand access to culturally-responsive online materials in a range of languages, as this is an area where many commercial products currently in use fall short.[128] This is one element of a needed digital inclusion strategy that designs innovative approaches to online and blended instruction for vulnerable students. Policymakers and local leaders should support these efforts by providing ample guidance and resources for educators. In addition, facilitating communication among principals and other experts will support the diffusion of best practices and innovative approaches.

Over the long term, the federal government should plan for and invest in wide expansion of broadband infrastructure. In addition, policymakers should devise strategies for supporting principals as they reimagine the design of their schools' curricula and work to capitalise on the strengths of digital technologies in order to make remote, hybrid and flipped instructional options more widely available. Doing this not only offers benefits in terms of inclusion and academic achievement, it is also fundamental to crisis preparedness in the 21st Century. Having a robust instructional technology infrastructure within schools will facilitate agility when facing future school closures. Closures due to fires will be more frequent in coming decades as the effects of climate change become more pronounced. In general, addressing climate-related natural disasters is a matter of justice. It is expected that communities in arid inland areas and Northern coastal regions, which are home to many of Australia's Aboriginal and Torres Strait Islander peoples, will be disproportionately affected by bushfires, drought, storms, flooding and sea-level rise in the coming years.[129] Schools must therefore prepare for both future pandemics and fire hazards. At the time of writing, in early February 2021, fires around Perth had destroyed over 80 homes and forced the evacuation of areas of Western Australia that were already under a COVID-19 lockdown.[130] This sad circumstance illustrates the need for the technological approaches that schools in our sample were prioritising.

3. Mitigate learning loss among vulnerable students

Student learning loss is at the forefront of educators' minds, particularly at schools with a more vulnerable student population. Our finding that more than half of the principals in our sample who led lower-ICSEA schools believed the pandemic had a negative effect on their students' learning is consistent with previous research that the pandemic had widened the educational learning gap.[131] Mitigating those losses must be a high priority at both the school and policy levels.

Previous research indicates that small-group tutoring can help close learning gaps with targeted instruction to the most vulnerable students.[132] In the short term, tutoring can help mitigate pandemic-related learning loss, and in the long term, it can contribute to closing longstanding equity gaps. Therefore, Pivot recommends that policymakers and sector leaders allocate additional resources to support additional tutoring in under-served communities. Some tutoring could be done through schools, with peer- or teacher-led tutoring targeted to specific learning gaps. Outside programs could also provide tutoring, particularly with pre-service teachers under the guidance of teaching experts.[133]

Although programs would have to be adapted to fit community needs and capabilities, previous research points to some practices that should be prioritised. Although teachers provide the most learning gains through tutoring,[134] our findings suggest they may not be available for additional duties. Non-professional members of the community, especially pre-service teachers, can be effective tutors if they are screened, trained and monitored properly.[135] Tutors should be trained to provide structured lessons with subject-specific pedagogical techniques and ongoing feedback.[136] Ideally, groups should be kept small (i.e. two to four students) with flexible homogeneous grouping in order to address specific learning gaps and allow for effective differentiation.[137] Tutoring programs should also prioritise student attendance and strong relationships.[138] This requires an understanding of the local context, including the most accessible site of instruction (classroom, home, online) and the most effective form of communication with students and families.[139] Hiring tutors is another opportunity to increase the representation of people from marginalised communities, including Aboriginal and Torres Strait Islander persons, among instructional staff. An effective tutoring program will likely require a large investment of financial resources, time and human capital. Sector leaders can also provide support through coordination, technical assistance and dissemination of best practices.

Due to fire, pandemics or simple logistics, it is likely that some future instruction will take place at a distance. In order to prevent additional crisis-related learning loss, schools and policymakers must develop non-digital instructional solutions to reach students who live in areas without sufficient broadband infrastructure. Schools must also create clear plans to adapt individualised support services (e.g., speech, physical or occupational therapy) so they can reach students with disabilities when schools are closed.

In general, Pivot recommends proactive steps to prevent vulnerability to learning loss in the future, such as ensuring equitable access to early childhood education, extracurricular activities, workplace learning and other experiences that enhance student learning and wellbeing. In addition, policymakers should support schools to implement comprehensive frameworks for the early detection of student needs and the provision of effective tiered interventions for vulnerable learners. As we have shown, the pandemic highlighted educational inequality and widened it considerably. The best way to minimise educational gaps is to plan for future disruptions and address ongoing inequality.

4. Care for the wellbeing of all students

The COVID-19 pandemic has increased the urgency of understanding and addressing student wellbeing in Australia, particularly for children and youth navigating economic vulnerability and/or living in historically marginalised communities. Emerging research, including this report, strongly suggests that the pandemic

has had negative repercussions for the wellbeing of Australian youth.[140] In early 2021, public health experts reported that the number of Australian students presenting with mental health concerns signals a burgeoning crisis.[141]

Principals are well-positioned to help address these concerns. As community leaders, they are vital to creating safe climates and collaborative school cultures that support wellbeing, particularly through facilitating trusting relationships between teachers, students and families. Trust, safety and collaboration are vital to ensuring students' emotional, social and academic health, particularly during times of crisis.[142] School principals can build on the strengthened communication and engagement in their communities by conducting needs assessments aimed at understanding which interventions would best support community wellbeing. In addition to gathering valuable data, this process will demonstrate principals' learning stance and further catalyse the development of more equal and trusting relationships with families and community members.[143]

As described earlier, wellbeing was a top priority for the majority of principals in our sample and a notable proportion wrote that wellbeing initiatives were a focus for 2021. Some of their planned initiatives also extended to families, including elements such as sharpening community engagement strategies, expanding online communication with parents, increasing family support services, and hosting more webinars and workshops for greater school communities. In addition, several mentioned plans to engage in ongoing monitoring of wellbeing.

It is important that systems for tracking and improving wellbeing are psychologically safe, culturally responsive and connected to evidence-based intervention strategies. Assets-based, whole-school approaches to wellbeing, which include all community stakeholders and build on their strengths, are particularly promising.[144] A whole-school approach can assist the implementation of social and emotional learning (SEL) curriculum at all grade levels, which is among the most effective approaches to improving measures of student wellbeing.[145] Efforts at promoting school belonging by cultivating positive student-teacher relationships and peer networks have also been associated with enhanced wellbeing and improved academic performance.[146] This may be because social support is one protective factor that supports resilience (i.e., the ability to bounce back after adversity) and strengthening these protective factors supports mental health and wellbeing.[147] Finally, whole-school anti-bullying initiatives are important, as physical and emotional safety are foundational to wellbeing and bullying is the most common threat to students' safety at school.[148]

Student voice, or the ability for students to have a say in decisions that affect them in a school environment, is a crucial component of wellbeing. Researchers are beginning to explore and affirm the need to understand children and young people's views about wellbeing and gather their feedback about how key issues affect them.[149] Participatory research with children and young people is vitally important in developing student-centred practices. Research suggests that enabling students to have a voice in schools may help to increase the effectiveness and applicability of interventions designed for them, as well as empowering those involved in the process.[150] Interventions developed with students' feedback are likely to be a better fit for the unique context of their school environment and may encourage greater student buy-in.[151]

Policymakers and sector leaders can play an important supporting role in helping principals develop strong school communities and supporting student wellbeing.[152] In the short term, policymakers should work to increase access to school-based mental health professionals. In addition, stakeholders can help by connecting principals with wellbeing tools and interventions that are vetted by researchers and mental health professionals. Organisations in the sector can develop coalition approaches to sharing best practices in cultivating wellbeing at schools. In the long term, policymakers should strongly consider the establishment of dedicated funding streams for wellbeing initiatives, and sector leaders should leverage public-private partnerships to increase system capacity in this area.

All wellbeing initiatives need to be sensitive to their context, both organisational (i.e., school) and cultural (i.e., community). In this area, Aboriginal and Torres Strait Islander principals are at the forefront, as our qualitative feedback and existing literature show that their engagement in inclusive communication practices prioritises cultural context and support for their communities.[153] Aboriginal and Torres Strait Islander school leaders, due to their deep understanding and knowledge of contexts, can provide appropriate support to students and staff.[154] In the short term, stakeholders in the educational sector should expand Indigenous Educational Worker programs. The employment of Aboriginal and Torres Strait Islander community members, especially Elders, as liaison officers in schools is an essential strategy for supporting Aboriginal and Torres Strait Islander students and helping non-Indigenous school staff grow in their understanding of the traditions, structures and knowledges of local communities of Aboriginal and Torres Strait Islander peoples.[155] Over the longer term, but starting as soon as possible, it is imperative for Australian states and territories to build a leadership pipeline for Aboriginal and Torres Strait Islander school principals.

Trauma-informed pedagogical practices and culturally responsive and sustaining education are also key elements of mitigating learning loss and improving student wellbeing. In Pivot's July 2020 paper, we described our recommendations in these areas in detail.[156] Pivot recommends the formation of a government task force including representatives from a diverse range of cultural groups that can work to provide comprehensive, research-informed guidance on these issues.

5.   Design and build infrastructure for change

The development of nimble models for pivoting to and from hybrid models of instruction (i.e., those that blend in-person and remote learning) is a fundamental part of crisis planning for schools. Policymakers can support lower-ICSEA schools by learning how policy interventions facilitate this process for them. In addition, principals in Victoria, who have experienced multiple school closures, may have insights that will help principals in the rest of the country prepare for additional periods of remote schooling.

In the short term, policymakers and stakeholders should continue to support principals and school networks in coronavirus prevention and crisis planning. Effective crisis plans should include details about rapid messaging to the school community and quickly pivoting to and from in-person and hybrid models of schooling. The latter should attend to how staffing assignments may change when the model shifts and the role of centralised learning management systems in organising instructional content across models. In addition, comprehensive crisis plans should include specifications for the delivery of supplementary mental health and trauma-recovery services according to the anticipated need associated with various contingencies.[157] Plans should include strategies for delivering such services both online and offline.[158]

Pandemic-related changes to safety protocols and school buildings, planned in consultation with public health experts and reflecting the latest science, should prioritise COVID-19 prevention with the intent of safely keeping in-person schooling open as an essential service for those who need it most. Key elements of transmission prevention in schools include plans for mask-wearing and physical distancing, isolation of ill individuals and contact tracing, personal hygiene protocols, upgrades to ventilation systems and disinfection of surfaces in the school environment.[159]

Where bushfire safety and the impacts of climate change are also a concern, plans for upgrades to existing physical school infrastructure should include climate adaptation considerations[160] such as upgrading smoke filtration capability in ventilation systems, strengthening cooling systems, tightening building envelopes and reinforcing windows. In the long term, it will be necessary for the government to invest in sustainable and climate-proofed school construction, starting in areas most at risk for climate-related natural disasters. The Commonwealth Government's *National Climate Resilience and Adaptation Strategy* published in 2015 outlines many critical strategies for the future, but it only mentions school buildings once (and only in reference to Tuvalu).[161] As the Australian Department of Agriculture, Water and the Environment updates the national strategy in 2021,[162] Pivot recommends adding explicit attention to infrastructure for schooling in consultation with a cross-section of stakeholders in the education sector.

This group should include Aboriginal and Torres Strait Islanders leaders, as their communities have been disproportionately impacted by climate change, and they have valuable expertise in climate adaptation.[163] In addition, the national strategy should support self-determined localised climate adaptation efforts in Aboriginal and Torres Strait Islander communities.[164]

Crisis planning and infrastructure investments are essential future-proofing for equity in Australian schooling. Without them, marginalised communities will continue to be disproportionately impacted by crises and the associated disruption may cause vulnerable students to fall further behind. Beyond this, Pivot recommends that sector leaders form a cross-sector, public-private advocacy coalition dedicated to educational improvement and educational justice. This coalition will work together to design innovative solutions and champion evidence-based policies designed to address inequity in Australian schooling, as well as partner with advocacy groups across Australia engaged in complementary equity and justice work outside of the school context.

Methods appendix

Questionnaire

In close consultation with representatives of CAP's member organisations, three members of Pivot's research team developed the *2020 Shifting Landscape of School Leadership in Australia Survey* in September and October 2020. This 15-minute survey asked principals about: their schools' response to the pandemic; the challenges facing their school community; the impact of the pandemic on principals, teachers, students and families; principals' concerns and priorities for 2021; and what types of support would be most valuable in the coming year. The items were a mix of multiple-choice, multi-select, and open-ended formats.

All potential participants were provided with information that apprised them of the risks of participation and gave their explicit informed consent to participate. The data collection was anonymous, with no IP/geo-markers or other identifiers collected. Further de-identification was done by collapsing demographic response categories that had very small groups. There was no incentive for participation.

Sample

CAP organisations emailed the link to the online survey to their members in late October 2020. Members received one or two reminders from their professional associations while the survey was open. Pivot closed the survey on 1 December 2020. A total of 473 respondents agreed to the research consent form and reached the first demographic question. Of these, eight terminated due to not being senior principals, and a further two respondents were removed as they did not work at Australian schools. Although there was some attrition of participants throughout the survey, the completion rate was 83.2%. Readers should note that for ethical reasons, most of the questions were not compulsory, resulting in a fluctuating sample size. Therefore, we indicate the sample size for survey items discussed in this paper.

Readers should also note that due to the sampling method and the response rate, this is not a representative sample of Australian principals. For example, principals who choose to join professional associations likely differ in non-trivial ways from their peers who do not join such associations. Thus, our findings cannot be generalised beyond the sample. However, the findings point to plausible trends that warrant further investigation and suggest the need for concrete policy changes. In Tables A1-A6 below, find a summary of respondents and their schools.

Table A1. Leadership role

Principals	83.8%
Assistant or deputy principals	12.5%
Heads of junior, middle, or senior schools	3.7%

Note. n = 456

Table A2. Years of leadership experience

15 years or less	34.1%
16 to 20 years	26.2%
21 years or more	39.7%

Note. n = 393

Table A3. Respondent state/territory

Australian Capital Territory	2.2%
New South Wales	29.6%
Northern Territory	0.9%
Queensland	23.9%
South Australia	6.4%
Tasmania	5.0%
Victoria	23.0%
Western Australia	9.0%

Note. n = 456

Table A4. Urbanicity

Major city	56.7%
Inner regional	19.4%
Outer regional	19.6%
Remote/Very remote	4.2%

Note. n = 453; Percentages do not sum to 100% due to rounding.

Table A5. School configuration

P-12	24.9%
Primary	17.3%
Secondary	48.2%
Other	5.1%

Note. n = 456; The other category included P-9 and specialist schools.

Table A6. School enrolment

500 or fewer pupils	31%
501 to 1000 pupils	31%
1001 or more pupils	38%

Note. n = 456

About ICSEA and school sectors

The Australian Curriculum, Assessment and Reporting Authority (ACARA) created the Index of Community Socio-Educational Advantage (ICSEA) to enable fair comparisons of achievement.[166] The 2020 calculation of ISCEA followed the formula: ICSEA = SEA (direct) + Remoteness + Per cent Indigenous. The Socio-Educational Advantage (SEA) component of the ISCEA score is derived directly from student records using measures such as parental occupation and educational level. Given ICSEA's components (i.e., ethnicity, geographic location, occupation, education), it is a reasonable proxy for the average high socioeconomic status (SES) of a school community, comparable to other SES measures in educational research.[167] Many scholars use ICSEA in assessments of equity in Australian schooling.[168] However, it is important to note that ICSEA is not a rating of school quality or a measure of student performance.[169]

ICSEA values fall on a scale designed to have a median of 1000. ICSEA values range from approximately 500 (representing schools in the least advantaged communities) to about 1300 (representing schools in the most advantaged communities). For this analysis, we used 1000 (the population median) as the cut point for our lower- and higher-ICSEA school groups. Table A7 illustrates that the sample has an over-representation of schools with ICSEA scores above 1000.

Table A7. ICSEA

Lower-ICSEA (<1000)	152
Higher-ICSEA (1000+)	270

Note. n = 422

This over-representation can also be seen when the sample is broken down by school sector, with Catholic and independent sector schools both over-represented in the sample, most likely due to the deliberate cross-sector approach to the research.

Table A8. ICSEA and Sector

	% of total schools Sample	% of total schools Population	% ICSEA <1000 Sample	% ICSEA <1000 Population
Catholic	44.7%	17.8%	28.9%	17.5%
Government	33.8%	70.2%	64.1%	59.3%
Independent	21.5%	12.0%	6.7%	16.2%

Note. n = Population figures from 2019 ACARA data; *n* = 422 Percentages do not sum to 100% due to rounding.

Analysis

The research team used tables of frequencies and percentages, cross-tabulations and bar graphs to examine the categorical variables derived from the multiple-choice and multi-select survey items. Partial responses were included only for answered items, with no further imputation or treatment of missing values.

Chi-square tests of independence, Fisher's Exact tests and generalised Cochran-Mantel-Haenszel stratified tests of association (CMH test) were used to examine statistical significance of relationships between ICSEA and other ordinal categorical variables.[170] Although this test has traditionally been used for binary variables, recent extensions of the test enable analysis of large tables and the correct treatment of ordinal data while controlling for a third stratifying factor.[171] Using school sector as the stratifying variable accounted for the disproportionate concentration of religious and independent schools in the higher-ICSEA group, controlling for the possibility that attributes related to sector underpinned observed associations in the data. Test statistics are located in the endnotes throughout the paper.

In addition, the research team used an iterative coding process to analyse the qualitative data from four open-response items.[172] Emergent codes related to themes of resilience, communication, family engagement, community needs, teachers' work, digital pedagogy and student wellbeing. Quotes included in the paper are illustrative of themes that emerged during coding. Each represents an evidence trail triangulated across multiple informants and multiple sources of data (i.e., open- and closed-ended questions).[173] In order to meet ethical standards and enhance the descriptive validity of our research, the team conducted member checks with our partners in the Coalition of Australian Principals. Member checking involves taking data and interpretations back to study participants or host organisations for them to confirm or disconfirm the credibility of findings.[174]

Endnotes

[1] Flack, C. B., Walker, L., Bickerstaff, A., Earle, H., & Margetts, C. (2020a). *Educator perspectives on the impact of COVID-19 on teaching and learning in Australia and New Zealand*. Pivot Professional Learning.

[2] Flack, C. B., Walker, L., Bickerstaff, A., & Margetts, C. (2020b). *Socioeconomic disparities in Australian schooling during the COVID-19 pandemic.* Pivot Professional Learning.

[3] Note that the appendix at the end of this report contains detailed methodological information.

[4] Angelico, T. (2020). Educational inequality and the pandemic in Australia: Time to shift the educational paradigm. *International Studies in Educational Administration*, 48(1), 46-53; Sonnemann, J. & Goss, P. (2020). COVID catch-up: *Helping disadvantaged students close the equity gap*. Grattan Institute. https://grattan.edu.au/wp-content

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[17] Due to the spread of weeks of remote learning, this was mostly conducted with a median-split (groups above or below 13 weeks) or by comparing Victoria to the other states due to their second extended lockdown period.

[18] All $p > .1$

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[22] Dudgeon et al., 2020

[23] All $p > .1$

[24] All $p > .1$

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[26] Fisher's exact test; $p < .001$

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[30] Khalifa et al., 2018

[31] Davies & Halsey, 2019

[32] The four-point scale included the following response options: very successful; moderately successful; slightly successful; and not at all successful.

[33] 76.8% (*n* = 73) of school principals in Victoria worked in higher-ICSEA schools compared to 60.2% (*n* = 197) of principals in other states and territories, $\chi^2 = (1, N = 338) = 7.11, p = .007$

[34] $\chi^2_{MH} = (1, N = 422) = 8.09, p = .004$

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[38] Devices χ^2 = (1, *N* = 394) = 37.08, *p* < .001, Internet χ^2 = (1, *N* = 394) = 60.18, *p* < .001, Support χ^2 = (1, *N* = 394) = 32.74, *p* < .001, Software χ^2 = (1, *N* = 394) = 27.72, *p* < .001 , Prof. learning χ^2 = (1, *N* = 394) = 16.00, *p* < .001

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[41] Chrysanthos, 2020

[42] Flack et al,, 2020a

[43] χ^2 = (2, *N* = 378) = 18.76, *p* < .001

[44] Progress: χ^2 = (3, *N* = 376) = 17.06, *p* < .001, Engagement: χ^2 = (3, *N* = 376) = 16.2, *p* < .001

[45] All *p* > .1

[46] Note that mental health is one dimension of wellbeing, which is a broader concept that encompasses the "psychological, social and physical resources that [an individual] needs to meet a particular psychological, social and/or physical challenge" (Dodge et al., 2012, p. 230); Dodge, R., Daly, A. P., Huyton, J., & Sanders, L. D. (2012). The challenge of defining wellbeing. *International Journal of Wellbeing*, *2*(3).

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[50] Z-test for equality of proportions, χ^2 = (1, *N* = 375) = 20.83, *p* < .001

[51] Z-test for equality of proportions, χ^2 = (1, *N* = 375) = 4.85, *p* = .028

[52] Although this difference was not statistically significant at a 5% level of significance, it was significant at a 10% level of significance, Z-test for equality of proportions, χ^2 = (1, *N* = 375) = 2.99, *p* = .084

[53] Z-test for equality of proportions, Support: χ^2 = (1, *N* = 375) = 7.70, *p* = .006; Devices: χ^2 = (1, *N* = 375) = 39.47, *p* < .001

54 Flack et al., 2020b

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57 $\chi^2 = (3, N = 391) = 10.39, p = .016$

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[69] Riley et al., 2020

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[72] Chase & Taylor-Guy, 2020; Harris, 2020; Smith & Riley, 2012

[73] In addition to those displayed in Figure 9, response options included: conflict resolution; information technology; financial management; working with systems and/or government agencies; fundraising; operations; and building and facilities management. School principals also had the option of writing in an answer. These were all less frequently selected than the skills displayed in the figure.

[74] The length of lockdown was not a significant differentiating factor either. All $p > .1$

[75] Leaders of lower-ICSEA schools were significantly more likely to select knowledge of students as among the top three most helpful skills for pandemic leadership relative to their counterparts at higher-ICSEA schools, $\chi^2 = (1, N = 383) = 5.48, p = .019$. More research is needed to understand why this is the case. It may be that the importance of alignment in the lived experience of school staff and students grows in times of crisis.

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[86] Support staff p = .098, all others p > .1

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[88] Z-test for proportions, Wellbeing χ^2 = (1, N = 371) = 5.11, p = .024, Technology χ^2 = (1, N = 371) = 18.58, p < .001

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