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Changed schools and changed classrooms: Lessons learned from the COVID-19 era

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"The COVID-19 pandemic has caused major shifts in education, requiring rapid workplace changes for teachers and new types of learning environments for students"

Abstract

This paper reports on the final stage of a mixed methods research study in which the full population of teachers from Adventist Schools Australia (ASA), the third largest school system in Australia, were invited to contribute to an online survey. During the final stage of this study, ten focus group discussions were conducted, and the participants represented teachers from ASA schools in every state and territory in Australia. Teachers in these focus group discussions provided commentary about their experiences during the international COVID-19 pandemic. They were asked to share perceptions of how lockdowns changed learning and relationships within their school and how they viewed the future of education and teaching, post-COVID. Results of the focus group transcript analyses revealed a mixed reaction to life as a teacher returning to a physical classroom after the COVID-19 lockdowns. Multiple changes were noted in their schools and classrooms. While teachers were happy to return to face-to-face teaching and the company of their colleagues and the students, they expressed the need for more resources and professional learning in the use of Information and Communications Technology (ICT), alongside concerns about the wellbeing of students, themselves and their colleagues. Now, several years after the COVID-19 lockdowns, the results of this study are offered for consideration by teachers, school administrators and policymakers in the ASA system. The results may also be relevant to those within and outside Australia who experienced the ramifications of the worldwide COVID-19 pandemic while also planning how to mitigate the pandemic's ongoing influence on teachers and student learning.

Introduction

Stress experienced by schoolteachers and its subsequent negative impact on teacher wellbeing has been widely documented (Aldrup et al., 2018; Clement, 2017; Ferguson et al., 2017; Skaalvik

& Skaalvik, 2017). The worldwide COVID-19 pandemic and consequent changes in the education sector have added further complexities to teachers' roles due to rapid, wide-ranging changes in schools' policies and practices which have forced pivotal adjustments in many aspects of pedagogy, technology, time management, communication, administration and hygiene. Such changes have been described as "both unprecedented and widespread in educational history" (Zhao & Watterston, 2021, p. 3). All areas of society have been impacted by the COVID-19 outbreaks and the lockdowns (Nicola et al., 2020). Impacts on schools have been central to the community because, when schools are in lockdown, the effect on families (Cluver et al., 2020) and the additional stress imposed on teachers (Kilgour et al., 2021) has been experienced by, and has been measurable and observable by, most members of the community. As well as the wide-ranging consequences of COVID-19 for schools and the community, the advent of COVID-19 introduced a new range of stressors particular to teachers. Whilst much research has been conducted into the impact of the pandemic on learning and teaching since 2020 (Pokhrel & Chhetri, 2021), a gap remains in our understanding of the direct impacts of COVID-19 on teachers from their perspective.

The vast changes in technology used by schools during the pandemic have opened up more potential for innovation, as noted by Zhao and Watterston (2021) who refer to such changes as never being "fully realised" before COVID-19 which created a "unique opportunity for educational changes that have been proposed before COVID-19"(Zhao & Watterston, 2021, p. 3). Morris et al. (2022) go on to propose that COVID-19 highlighted two distinct opportunities for improvement around education 1) disadvantaged pockets in the education sector were further disadvantaged by COVID-19 thus presenting opportunities to promote more equality; and 2) alternate means of teaching and learning highlighted the advantages of using 21st century technologies (e.g., use of online learning) that now provide a model of education for the future.

While the aforementioned educational changes, triggered by COVID-19, have outlined some of the short-term changes that have occurred in educational sectors, findings from recent research also warn of the longer-term psychological impacts of the COVID-19 pandemic (Santomauro et al., 2021). Because parents, teachers and other significant adults in the lives of school students are now concerned about future outbreaks of COVID, Santomauro et al. (2021) have predicted they will be influenced by and concerned about many other factors in the future including: the uncertainty of the science of pandemics; the worry around politicians' responses to COVID-19; the impact of irresponsible media reporting and the accompanying sensationalism; large discrepancies in peoples' responses to risk scenarios; further risks to mental health; and even the constant worry over existentialism, the meaning of life and the possibility of death. While the research aims of the study reported in this paper are more contextualised at the school level, the longer-term psychological impacts of these far-reaching community concerns around future possible impacts of COVID-19 are, more than likely, not far from the minds of those who work in and attend our schools.

The premise that teacher quality is at the centre of quality learning is not new. A longstanding theme in educational research indicates teacher quality and quality teaching as some of the most important factors influencing student learning outcomes (Hattie & Yates, 2013). For example, Buckingham (2003) asserted two decades ago that effective teaching is more influential in student learning than reductions in class sizes. Bryant et al. (2020) continue to reinforce some baseline indicators of success such as ensuring literacy and numeracy are taught well, that technological devices are used effectively, that students are supported holistically, and that students are skilled in areas of future employment. Such recommendations, from past and current research, point to the importance of appropriate allocation of teachers, resources and time within schools to promote equality of educational opportunity. In many ways, the lessons learned from teachers during school lockdown periods have reinforced this message. However, the pressure of such significant changes on teachers' lives needs to be acknowledged, and mitigated where possible, to limit teacher attrition (Marshall et al., 2022).

The study reported in this article presents the voice of teachers from Adventist Schools Australia (ASA), one of the largest independent school systems in Australia, with a focus on the teachers' perspectives on the impact that COVID-19 had on teaching and learning, especially during school lockdowns. The study explored teachers' views of how education in the future may change in response to the challenges encountered during the pandemic. The authors anticipate that the findings from this study will inform teachers, administrators and policymakers within and outside Australia of how COVID-19 elicited mixed reactions among teachers with regard to returning to in-person teaching and navigating the *new normal* amidst the need for new resources.

"The vast changes in technology used by schools during the pandemic have opened up more potential for innovation"

This study adopted a two-stage mixed methods approach to investigate the COVID-related experiences and views of teachers

Method

This study adopted a two-stage mixed methods approach to investigate the COVID-related experiences and views of teachers across the ASA school system comprising 48 independent schools. Data were gathered between 2020 and 2022 using online questionnaires and focus group discussions, but this paper reports specifically on the component of the study in which teachers participated in focus group discussions. The teachers' responses to online questionnaires, conducted in an earlier component of the study, are reported elsewhere.

The participants

To supplement the data gathered during the earlier stages of the project (Kilgour et al., 2021) via online questionnaires, a selection of permanent and part-time teachers from 48 independent schools within the ASA private school system within Australia were invited to take part in focus group discussions during April and May in 2022. Teachers from all 48 ASA schools, across all states and territories in Australia, were invited to join these focus groups; thus, the invited participants in this study constituted the full population of teachers in the targeted school system. To ensure a wide range of teachers were included in the focus group discussions, the study's sample was based on the principles of purposive and cluster sampling (Byrnes, 2000). In total, ten schools across Australia participated in the ten focus group discussions including 29 teachers.

Data collection

To guide the data collection in the final stage of this project, a focus group discussion protocol was developed that included specific discussion questions, along with prompts and phrases to elicit detailed responses from the teacher-participants. Topics that featured in the focus group discussion questions were informed by findings of our initial literature review and results from the online questionnaires administered earlier in the project, and guided by the following questions:

- What is the narrative of ASA teacher experiences during school lockdown as to how it affected the learning and interpersonal relationships in the school and classroom environments?
- How do ASA teachers see education changing in the future as a result of COVID-19? And what needs to be done to support teachers in managing these changes?

Ten focus group discussions took place in the first half of 2022 via online video conferencing software (i.e., Zoom). They were audio recorded and then transcribed verbatim. Each of the ten focus group discussions lasted up to 60 minutes and included two to three teachers in each discussion. Each focus group discussion was guided by questions including:

- What was it like for you as a teacher during the school lockdown periods?
- Since COVID-19 began, what changes have you observed at your school? Or in your classroom?
- If we look to the future now, what support do you think you will require, as a teacher, because of the recent changes in your school since COVID-19 began?
- Are there any further comments you'd like to make regarding how COVID-19 has affected teachers, learning or schools?

Data analysis

The focus group discussions in the final stage of this study generated qualitative data that were analysed using a matrix analysis technique (Miles & Huberman, 2013; Patton, 2015), a technique used to manage, categorise and analyse qualitative data (Abraham et al., 2021; Hodgson et al., 2022). After the ten focus group discussions were transcribed, the transcript data were cleaned and collated, in readiness for the following steps of the data analysis process:

- refamiliarisation with the research study's intention;
- immersion and memoing;
- thematic coding, including a combination of deductive and inductive analysis, using a matrix analysis technique; and
- reporting data analysis findings.

To become familiar with the data set as a whole, the researchers first immersed themselves in the raw data through multiple readings of each transcript. During this step, memos were recorded alongside the data to capture initial observations (Rabiee, 2004). Next, a matrix analysis technique was employed to analyse the transcriptions and to facilitate the coding of these data. The matrix analysis technique used a combination of deductive coding (using pre-determined codes from our literature review, research questions and survey results) and inductive coding (to identify emergent codes and themes) similar to the technique used by Stuckey (2015). Cells in the y-axis of the matrix were labelled according to the key ideas within each of the relevant research questions and the research questions themselves, and the y-axis

included categories for pre-determined codes, emergent codes, raw data and data sources.

During the analysis process, each piece of data (in our case, each sentence), was allocated a label or "code". Common codes were grouped together to form themes and sub-themes, a process referred to as "thematical coding" by Robson and McCartan (2016). Once the data were all coded, some of the codes were collapsed or combined to remove repetition, while some of the less prominent codes were discarded. This coding clarification process identified dominant themes, made up of groups of codes, which acknowledged trends, gaps and patterns across the data. A final summary of the key themes in the focus group discussion data, with relationships between themes, is represented in a thematic map (outlined in Figure 1). The results of the coding process of the focus group discussion data are outlined in the 'Results' section below.

Results

Analysis of the focus group discussion transcripts revealed teachers' perceptions of how COVID-19 lockdowns affected in-school and in-classroom relationships as well as student learning, providing answers to one of our research questions: What is the narrative of ASA teacher experiences during school lockdown as to how it affected the learning and interpersonal relationships in the school and classroom environments? The teachers also expressed views about the future of education, and their ideas about how to support teachers to manage these changes, thus providing answers to our other research question: How do ASA teachers see education changing in the future as a result of COVID-19? And what needs to be done to support teachers in managing these changes?

The effects of COVID-19 school lockdowns

The teachers viewed the effects of school lockdowns primarily in a negative manner, commenting on how their work as teachers was impacted and how their students' learning was impeded especially in practical subjects. They described impacts at the classroom level, explaining how lockdowns negatively affected student learning within classroom environments. They also reported that the quantity and intensity of their work as teachers increased. Details and examples of these impacts are now described.

The teachers described many negative impacts on the nature of student learning, especially the way in which conditions of lockdown resulted in a decreased quality in students' performances, reduced student motivation and attendance, and a lack of progress:

> "… if that learning is not really interactive, then they are not going to be that engaged or interested." (Teacher B, Focus Group Discussion 5)
>
> "… they are so behind … at least a year and a half, if not two years, behind where they should be, because we just weren't able to really develop them the way that they should have been through that." (Teacher A, Focus Group Discussion 3).

When describing how lockdowns affected their work as teachers, the teachers reported how they faced uncertainty on many levels:

> "… the uncertainty all the time, the uncertainty of COVID and what it was, how would it impact us on a personal level, added that extra layer of stress." (Teacher C, Focus Group Discussion 2)

They also reflected on negative outcomes from lockdowns in association with their workload, especially in relation to the following issues:

- increased workload and expectations: "people are struggling, because the … I guess the workload is a lot and it is more stressful and the expectations are higher from parents and kids." (Teacher C, Focus Group Discussion 6);
- adaptation to online teaching: "it was just another thing we had to adapt to. Getting the systems in place to facilitate the student learning was a big challenge … I would argue how successful it was and how effective it was for student engagement and how well the students actually achieved or performed during that time." (Teacher C, Focus Group Discussion 2).

> *The teachers viewed the effects of school lockdowns primarily in a negative manner*

While the teachers' comments were largely dominated by their descriptions of negative impacts, they did report some benefits of online learning for some students:

> *"Some of the kids absolutely thrived in this experience … and they got to see the benefits if they really applied themselves."* (Teacher A, Focus Group Discussion 7)
>
> *"There are some benefits in terms of, you know, creating resilience, problem solving ... those 21st century skills that, or habits of mind that, often get neglected when everything goes smoothly."* (Teacher B, Focus Group Discussion 8)

Many of their positively-slanted comments were typically reported at the wider school level in relation to the school overall ("it also created a lot of teamwork, we supported each other") and how

they encountered some useful professional learning opportunities due to the lockdown conditions ("from a technological stand point, our primary teaching staff have really shot upwards in trajectory").

Lastly, when describing the impact of lockdowns, teachers frequently referred to uncertainty and stress:

> *"… it was quite a crazy period, not knowing …"*
> (Teacher A, Focus Group Discussion 10)
>
> *"… we were all getting very stressed and overworked."*
> (Teacher B, Focus Group Discussion 9)

The structure represented by the major themes and sub-themes that were evident in the teachers' perceptions of how lockdowns affected their work as teachers and their students' learning are outlined in Table 1. This structure, also noted in the quotations cited above, reflects how these impacts were both student- and teacher-related. The summary represented in Table 1 reveals the teachers' recent experiences of working during the pandemic, noting both school-wide and classroom-based priorities, thus revealing their awareness of administrative issues across the school as well as the learning- and teaching-focused needs of students and teachers.

"Teachers predicted both negative and positive outcomes in relation to education in the future using their experiences of the recent lockdowns"

The future of education, post-COVID-19

As well as providing an emic (insider's) view (Patton, 2015) of how school lockdowns affected teachers' and students' work within classrooms, the teachers also reported on their predictions of how education would change in the future as a result of the COVID-19 pandemic. Their comments provided answers to the research question: How do ASA teachers see education changing in the future as a result of COVID-19? Teachers predicted both negative and positive outcomes in relation to education in the future using their experiences of the recent lockdowns and associated conditions to comment on what they had observed of themselves, their colleagues, and students.

The teachers expected their skills in online teaching and learning to improve in the future, based on their observations of how teachers met the challenges of online teaching during COVID-19. Despite some complaints, the benefits of using educational technologies were noted:

> *"I think with that empathy and compassion ... just a little bit of time to catch our breath and re-settle into this new way again would be really appreciated."*
> (Teacher A, Focus Group Discussion 1)

While the advent of new technologies being used for teaching and learning purposes was

Table 1: Thematic map of teachers' school lockdown experiences

	School-wide	Classroom-level
Student-focused – negative effects		
Poor engagement/ lack of student responsiveness		✓
Reduced motivation		✓
Lack of effectiveness (online learning)		✓
Students were falling behind in progress		✓
Practical subjects suffered		✓
Lower attendance		✓
Lack of student accountability		✓
Student-focused – mixed effects		
Some students thrived, others didn't		✓
Teacher-focused – negative effects		
High teacher workloads		✓
Needed to quickly adapt to online teaching		✓
Curriculum needed to be modified to online context		✓
Difficulties assessing and monitoring student learning		✓
Shorter lessons		✓
Less teaching intensity required		✓
More follow-up needed with students		✓
More focus on student wellbeing		✓
Modified assessment tasks were required		✓
Unreasonable government restrictions	✓	✓
Difficult to teach mixed (online and onsite) classrooms		✓
Teacher-focused – positive effects		
Support from other staff	✓	
Working as a team – "in it together"	✓	
Gained experience of online teaching		✓
Support from school management	✓	
General effects		
Uncertainty	✓	✓
Stress	✓	✓
"Crazy"	✓	✓

viewed as a positive outcome of the COVID-19 restrictions, there were concerns about these advances in terms of additional work, catering for students' needs and the introduction of new health routines:

> *"So I found it a challenge in terms of teaching, but also very consistent in terms of routine so my experience would be that I found some new things that I actually enjoyed ... just the way that we set up teaching to be online … there were some things about that that were yeah really refreshing. It was a positive and a negative I guess."*
>
> (Teacher B, Focus Group Discussion 7)

The teachers felt that students had developed a higher appreciation of the face-to-face school learning experience but that they also benefited from some of the online learning technologies:

> *"I asked the kids did it [additional technology] help and they appreciated it, they could hear better, they could see better, uhm, and it made it easier on me."*
>
> (Teacher C, Focus Group Discussion 4)

The loss of staff, due to overwork or vaccination issues, was also considered by some staff as they looked towards the future in schools:

> *"And to top it all off at the end, we had the vaccinations issue which made us all feel very disjointed and frustrated, because you were seeing those that you have been working with having to leave and so yeah ... it was a very, very hard time to get through."*
>
> (Teacher B, Focus Group Discussion 9)

The major themes and sub-themes that were evident in the teachers' predictions of educational changes in the future are outlined in Figure 1.

Lastly, teachers were asked to consider, what needed to be done to support teachers to manage the changes that they predicted (as outlined above). It is no surprise that teachers typically suggested that more time, more resources, and more professional development would be required to meet future educational needs:

> *"There are always more things for us to learn and ways we can interact from a different standpoint of technology that we may not have thought about."*
>
> (Teacher B, Focus Group Discussion 2)

They also commented on the need to have teachers' working conditions reviewed, along with school policies and curriculum saying that they would benefit from "more flexibility curriculum-wise to be able to focus primarily on numeracy and literacy" (Teacher B, Focus Group Discussion 10). However, whereas their comments about their experiences during school lockdowns featured many references to management and leadership of the staff and school, this theme did not feature in their comments about future educational needs.

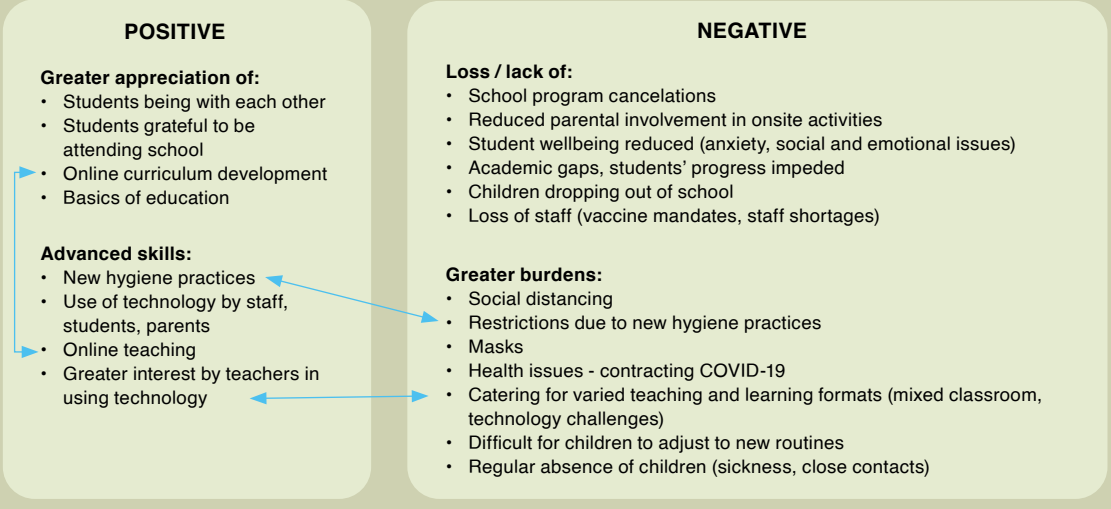
The major themes and sub-themes that were evident in the teacher's ideas about needed future support are summarised in Figure 2.

They also commented on the need to have teachers' working conditions reviewed, along with school policies and curriculum

Summary of Results

Overall, the teachers' comments about the impact of school lockdowns tended to focus on concerns at the classroom level, especially in relation to student learning (e.g., progress, engagement, attendance, motivation), with some awareness of school-wide

Figure 1: *Thematic map of predicted educational changes post-COVID-19, showing links between sub-themes*



issues (e.g., professional development, teamwork, workload, dealing with uncertainty). These results showed that, while lockdowns affected the wider school level, they mostly impacted teachers' work and students' learning at the classroom level. Their predictions of post-COVID-19 educational changes were more focused on teaching-related issues such as time, resources and professional development, with many of their comments focusing on the need for teachers to improve their online teaching skills and for schools to provide the technological resources to enable such a change.

> *the teachers' comments about the impact of school lockdowns tended to focus on concerns at the classroom level*

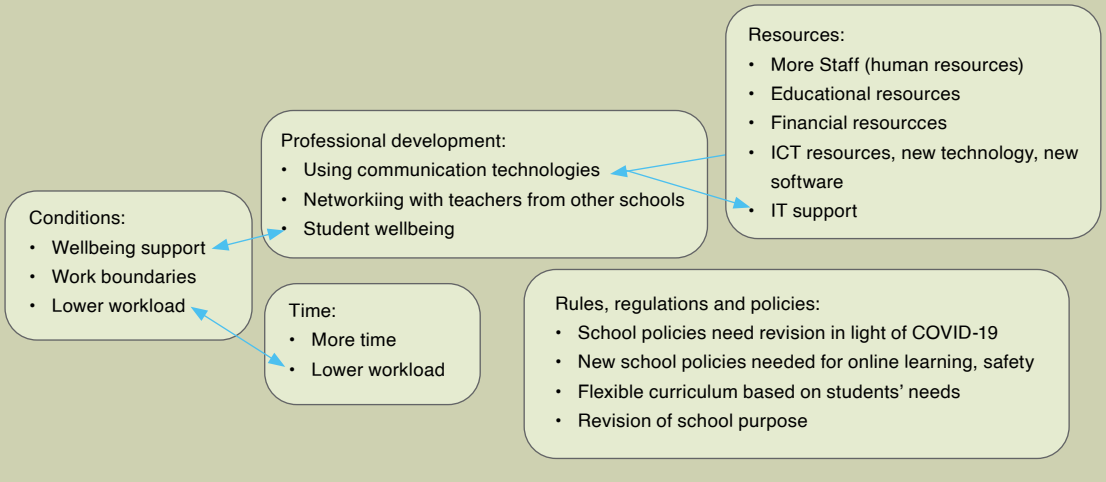
Discussion

The findings from this study provide further commentary regarding the causes of teacher shortages and teacher stress, as experienced by teachers in Australia before, during and after the COVID-19 pandemic. The teacher shortage in Australia has been a concern in recent years (Allen et al., 2019; Shine, 2015) and the advent of COVID-19 has placed additional stresses on the teaching profession (Kilgour et al., 2021). Australia's media frequently features stories that emphasise the stress encountered by teachers headlined by excessive workload. For example, The Australian newspaper reported "Nine out of 10 teachers told the committee's survey an excessive workload was putting teachers off, and large numbers also said salary rates and the profession's "diminished status" were to blame" (Parliament of New South Wales: Legislative Council, 2022). Because the stories associated with teacher shortages, stress and attrition have become so public, it is important to collect narratives from teachers themselves on exactly what the issues are, and have become, because of COVID-19, from the teachers' point of view. The study reported in this article is an example of such a narrative, providing data that are essential to establish a full understanding of teacher stress and attrition.

To put the narratives of teachers into perspective, the focus group discussions conducted during this study revealed that teachers need 'more' in several areas. They need more support for their wellbeing and professional development, also noted by other researchers (Pressley et al., 2021); more boundaries on their workloads and required time commitment; more policies and procedures to reflect the 'new normal' post-COVID-19; more resources, particularly in information and communication technologies; more professional development on the use of ICT; and more professional development on the wellbeing of students, themselves, and their colleagues. While these facets of teaching have always been areas of need for teachers (Alhija, 2015; Bower & Carroll, 2017; Hanif et al., 2011), our results show that the arrival of COVID-19, the lockdowns and the changed environment post-school lockdown have exacerbated the same areas of stress. It can be seen from the pre-2020 studies referred to in this article that professional learning needs for teachers, that have long been researched and discussed before COVID-19 became a household term, instantly had teachers saying either 'we need more of this', or 'there is an accelerated need in these areas' or 'we need this now!'.

These research outcomes have been supported by Robinson et al. (2023) who reported in their study that teachers were eager to support their own mental health, but that they were also concerned

Figure 2: *Thematic map of needed future support for teachers, showing overlaps between subthemes*



about the ongoing learning of students. The same study also made the observation that in many ways it was difficult to distinguish whether the reported anxiety of teachers was "evident prior to the pandemic or because of the pandemic" (Robinson et al., 2023). Whichever of these is true, the outcomes of our study, along with other studies that have been completed post the COVID-19 lockdowns (McCarthy et al., 2022; Mosley et al., 2023; Petrakova et al., 2021; Pressley et al., 2021; Santamaría et al., 2021), show that action needs to be taken to address the continually heightening level of teacher stress and anxiety and the accompanying exodus from the profession.

As reported by McCarthy et al. (2022), teachers need to be listened to. As we found out in this study, teachers are very capable of identifying their current needs and resources, including both physical workplace support and emotional support. We found the emotional impact of the pandemic to be far-reaching and went beyond workload to stress related disagreements with colleagues and leadership to loss of colleagues due to vaccine mandates. While these issues were isolated in time, the legacy has continued and has even been reported as post-traumatic stress disorder (PTSD) (Kukreti et al., 2021). In the emotional domain, counselling and mentoring (Mosley et al., 2023) have been found to be helpful as have the recognition and gratitude for the work teachers perform.

To move forward into the post-COVID era, we can learn from those who continued to teach and learn in our schools during the pandemic. This article offers the voices of a group of teachers from one large school system in Australia, thus adding to the voices from other educational stakeholders including school principals (Pietsch et al., 2022), school teachers in other schools (Marshall et al., 2022) and other school students in Australia (Maher, 2021). The teachers' voices reported in this article further extend our understanding of the intricacies of their experiences, their stresses, their mental health and their observations at a crucial period of time – soon after they had experienced an extreme global disruption to education and at a time in history when the school lockdowns in Australia had recently ceased. In this way, the article records the way in which the teachers in one school system in Australia were impacted by multiple challenges from the global pandemic, how they reacted to these challenges and how they anticipate meeting these challenges in the future.

Conclusion

The COVID-19 pandemic has caused major shifts in education, requiring rapid workplace changes for teachers and new types of learning environments for students. Teachers' practices have altered, they adapted to new learning environments and they dealt with governmental compliance around health and vaccine mandates. Students were required to learn in different ways; they accessed their teachers online (instead of face-to-face) and their attendance in classes was typically achieved through remote technologies. To supplement these general observations of the impact of COVID-19, the findings of this study have documented specific views from teachers who experienced and observed these changes first-hand. While they described many negative impacts on their teaching, their schools and their students, they expressed appreciation for the improved collegiality among school staff instigated by the pandemic's challenges, the support offered to teachers by school management and their improved skills in online teaching.

As well as reporting the changes they had observed during past lockdown periods, the teachers in this project provided insight into lessons learned from the COVID-19 pandemic and how teachers see education changing in the future. Faced with the changing landscape of post-COVID-19 education, findings from this study indicate that teachers will require greater support than ever as they navigate learning and teaching in the future. Whilst there have been some positive experiences arising from the pandemic, education authorities have been left with a long list of adjustments to consider, especially the teacher-related issues of time, resources and professional development. The tensions associated with expectations of teachers, student learning outcomes, the mental health of students and teachers, and resources to equip teachers with more change are ever-present.

> *Students were required to learn in different ways*

By presenting a collection of views of ASA teachers, the findings from this study provide evidence to teachers, school administrators and policymakers, within and outside Australia, of how the impact of the COVID-19 pandemic elicited a range of reactions among teachers. The study represents a snapshot in time, just after the school lockdowns ended, articulating the views of ASA teachers, specifically their views about the nature of the changes instigated by the pandemic and their predictions about how such changes need to be managed in the post-pandemic future. TEACH

References

Abraham, T. H., Finley, E. P., Drummond, K. L., Haro, E. K., Hamilton, A. B., Townsend, J. C., Littman, A. J., & Hudson,

T. (2021). A method for developing trustworthiness and preserving richness of qualitative data during team-based analysis of large data sets. *American Journal of Evaluation, 42*(1), 139–156. https://doi.org/10.1177/1098214019893

Aldrup, K., Klusmann, U., Lüdtke, O., Göllner, R., & Trautwein, U. (2018). Student misbehavior and teacher well-being: Testing the mediating role of the teacher-student relationship. *Learning and Instruction, 58*(December), 126–136. https://doi.org/10.1016/j.learninstruc.2018.05.006

Alhija, F. N.-A. (2015). Teacher stress and coping: The role of personal and job characteristics. Procedia-Social and *Behavioral Sciences, 185*(13), 374–380. https://doi.org/10.1016/j.sbspro.2015.03.415

Allen, J., Rowan, L., & Singh, P. (2019). Status of the teaching profession–attracting and retaining teachers. Asia-Pacific *Journal of Teacher Education, 47*(2), 99-102. https://doi.org/10.1080/1359866X.2019.1581422

Bower, J. M., & Carroll, A. (2017). Capturing real-time emotional states and triggers for teachers through the teacher wellbeing web-based application t*: A pilot study. *Teaching and Teacher Education, 65*(July), 183–191. https://doi.org/10.1016/j.tate.2017.03.015

Bryant, J., Dorn, E., Hall, S., & Panier, F. (2020). *Reimagining a more equitable and resilient K–12 education system.* M. G. Publishing.

Buckingham, J. (2003). Reforming school education: Class size and teacher quality. *Policy: A Journal of Public Policy and Ideas, 19*(1), 15–20.

Byrnes, R. B. (2000). *An introduction to research methods* (4th ed.). Pearson.

Clement, M. (2017). Why combatting teachers' stress is everyone's job. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas, 90*(4), 135–138. https://doi.org/10.1080/00098655.2017.1323519

Cluver, L., Lachman, J. M., Sherr, L., Wessels, I., Krug, E., Rakotomalala, S., Blight, S., Hillis, S., Bachman, G., & Green, O. (2020). Parenting in a time of COVID-19. *Lancet, 395*(10231), e64. https://doi.org/10.1016/S0140-6736(20)30736-4

Ferguson, K., Mang, C., & Frost, L. (2017). Teacher stress and social support usage. *Brock Education Journal, 26*(2), 62–86.

Hanif, R., Tariq, S., & Nadeem, M. (2011). Personal and job related predictors of teacher stress and job performance among school teachers. *Pakistan Journal of Commerce and Social Sciences (PJCSS), 5*(2), 319–329. http://hdl.handle.net/10419/188034

Hattie, J., & Yates, G. C. (2013). *Visible learning and the science of how we learn*. Routledge.

Hodgson, D., Cordier, R., Parsons, L., Walter, B., Chikwava, F., Watts, L., Thoresen, S., Martinez, M., & Chung, D. (2022). Developing and using matrix methods for analysis of large longitudinal qualitative datasets in out-of-home-care research. *International Journal of Social Research Methodology*, 1–14. https://doi.org/10.1080/13645579.2022.2159323

Kilgour, P. W., Northcote, M., Morton, J., & Pearce, K. (2021). An evaluation of teacher stressors in an era of COVID-19: An initial analysis. *TEACH Journal of Christian Education, 15*(2), 42–48. https://doi.org/10.55254/1835-1492.1497

Kukreti, S., Ahorsu, D. K., Strong, C., Chen, I.-H., Lin, C.-Y., Ko, N.-Y., Griffiths, M. D., Chen, Y.-P., Kuo, Y.-J., & Pakpour, A. H. (2021). Post-traumatic stress disorder in Chinese teachers during COVID-19 pandemic: Roles of fear of COVID-19, nomophobia, and psychological distress. *Healthcare, 9*(10), 1288. https://doi.org/10.3390/healthcare9101288

Maher, D. (2021). Impact of COVID-19 lockdowns on Australian primary and secondary school Students' online learning experiences. *Social Education Research, 2*(2), 298–314. https://doi.org/10.37256/ser.2220211062

Marshall, D. T., Pressley, T., & Love, S. M. (2022). The times they are a-changin': Teaching and learning beyond COVID-19. *Journal of Educational Change, 23*, 549–557. https://doi.org/10.1007/s10833-022-09469-z

McCarthy, C. J., Blaydes, M., Weppner, C. H., & Lambert, R. G. (2022). Teacher stress and COVID-19: Where do we go from here? *Phi Delta Kappan, 104*(1), 12–17. https://doi.org/10.1177/00317217221123

Miles, M. B., & Huberman, A. M. (2013). *Qualitative data analysis* (3rd ed.). Sage.

Morris, P., Park, C., & Auld, E. (2022). Covid and the future of education: Global agencies 'building back better'. *Compare: A Journal of Comparative and International Education, 52*(5), 691–711. https://doi.org/10.1080/03057925.2022.2066886

Mosley, K. C., Playfair, E. C., Weppner, C. H., Balat, A., & Mccarthy, C. J. (2023). 'The bread and butter of a difficult profession': Mentoring as a resource for teacher stress. *Teachers and Teaching, 29*(1), 20–36. https://doi.org/10.1080/13540602.2022.2144819

Nicola, M., Alsafi, Z., Sohrabi, C., Kerwan, A., Al-Jabir, A., Iosifidis, C., Agha, M., & Agha, R. (2020). The socio-economic implications of the coronavirus pandemic (COVID-19): A review. *International Journal of Surgery, 78*(June), 185–193. https://doi.org/10.1016/j.ijsu.2020.04.018

Parliament of New South Wales: Legislative Council. (2022). *Great teachers, great schools: Lifting the status of teaching, teacher quality and teacher numbers in New South Wales Report of the inquiry into teacher shortages in New South Wales (Report 48, Issue 3).* https://www.parliament.nsw.gov.au/lcdocs/inquiries/2882/Report%20No.48%20-%20PC%203%20-%20Teacher%20Shortages%20in%20NSW.pdf

Patton, M. Q. (2015). *Qualitative research and evaluation methods* (4th ed.). Sage.

Petrakova, A., Kanonire, T., Kulikova, A., & Orel, E. (2021). Characteristics of teacher stress during distance learning imposed by the COVID-19 pandemic. *Вопросы образования* (1), 93–114.

Pietsch, M., Tulowitzki, P., & Cramer, C. (2022). Innovating teaching and instruction in turbulent times: The dynamics of principals' exploration and exploitation activities. *Journal of Educational Change*, 1–33. https://doi.org/10.1007/s10833-022-09458-2

Pokhrel, S., & Chhetri, R. (2021). A literature review on impact of COVID-19 pandemic on teaching and learning. *Higher Education for the Future, 8*(1), 133–141. https://doi.org/10.1177/2347631120983481

Pressley, T., Ha, C., & Learn, E. (2021). Teacher stress and anxiety during COVID-19: An empirical study. *School Psychology, 36*(5), 367–376. https://doi.org/10.1037/spq0000468

Rabiee, F. (2004). Focus-group interview and data analysis. *Proceedings of the Nutrition Society, 63*(4), 655–660.

Robinson, L. E., Valido, A., Drescher, A., Woolweaver, A. B., Espelage, D. L., LoMurray, S., Long, A. C., Wright, A. A., & Dailey, M. M. (2023). Teachers, stress, and the COVID-19 pandemic: A qualitative analysis. *School mental health, 15*(1), 78□89. https://doi.org/10.1007/s12310-022-09533-2

Robson, C., & McCartan, K. (2016). *Real world research* (4th ed.). John Wiley.

Santamaría, M. D., Mondragon, N. I., Santxo, N. B., & Ozamiz-Etxebarria, N. (2021). Teacher stress, anxiety and depression at the beginning of the academic year during the COVID-19 pandemic. *Global Mental Health, 8*, e14. https://doi.org/10.1017/gmh.2021.14

Santomauro, D. F., Herrera, A. M. M., Shadid, J., Zheng, P., Ashbaugh, C., Pigott, D. M., Abbafati, C., Adolph, C., Amlag, J. O., & Aravkin, A. Y. (2021). Global prevalence and burden of depressive and anxiety disorders in 204 countries and territories in 2020 due to the COVID-19 pandemic. *The Lancet, 398*(10312), 1700–1712. https://doi.org/10.1016/S0140-6736(21)02143-7

Shine, K. (2015). Reporting the 'exodus': News coverage of teacher shortage in Australian newspapers. *Issues in Educational Research, 25*(4), 501–516.

Skaalvik, E. M., & Skaalvik, S. (2017). Dimensions of teacher burnout: Relations with potential stressors at school. *Social Psychology of Education, 20*, 775–790. https://doi.org/10.1007/s11218-017-9391-0

Stuckey, H. L. (2015). The second step in data analysis: Coding qualitative research data. *Journal of Social Health and Diabetes, 3*(1), 7–10. https://doi.org/10.4103/2321-0656.140875

Zhao, Y., & Watterston, J. (2021). The changes we need: Education post COVID-19. *Journal of Educational Change, 22*(1), 3–12. https://doi.org/10.1007/s10833-021-09417-3

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