



# RESEARCH PAPER

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# DIGITAL EVOLUTION



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CyberHound Research Paper

Challenges And Opportunities In Schools From The Digital Evolution

Introduction

This research paper is designed to provide school leaders with an overview of the challenges and opportunities being faced by other schools across Australia and the priorities this has highlighted. Three key focus areas are explored in this paper that have particular relevance for school leaders.

Research Methodology

Data was gathered from over 100 school leaders and educational technology experts over the course of 12 months. Participants were surveyed using CyberHound’s Digital Risk Assessment tool, which closely examined schools’ level of risk in their online and digital environments. The survey involved interviews with representatives from IT, Business Management, eLearning, Principals and Deputy Principals in schools of all sizes and type. Interviews focused on a number of potential risk factors and the three key findings are presented in detail in this paper. This data was then anonymised and examined for overall trends that could help guide other schools. Comparisons of digital risk were generated in state-based formats and for school sectors.

Executive Summary

CyberHound’s senior research team members analysed data provided by over 100 school leaders to examine potential risks in the ongoing digital enablement in and outside classrooms across Australia. Our extensive research found a number of trends evident which are explored within this research paper with independent research used to drill further into the key findings. We found that the highest priority for school leaders is the wellbeing of their students. Wellbeing within the school environment was echoed in the home with cybersafety being seen as a key consideration for families when selecting schools. While cybersafety and security are key pressure points for leaders, we also found that schools may be challenged with having the Internet capacity to deliver on ever increasing teaching opportunities and needs. The final summary outcome we explore in this research paper is the challenge facing teachers in the classroom and how some schools are evolving tools and training needed by teachers.

CYBERSAFETY FOCUS



How important is cybersafety and digital citizenship enablement in attracting families to the school?

87%

Eighty-seven percent of respondents said this was of high importance.

CLASSROOM CHALLENGES

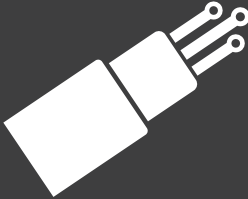


Are teachers keen to get access to more online teaching resources?

84%

Only sixteen percent of respondents said that they were not keen for more online resources.

INTERNET CAPACITY



Do you have full visibility of how Internet capacity is being used in the school?

31%

Under a third of respondents were confident that they had full visibility of school Internet capacity use.

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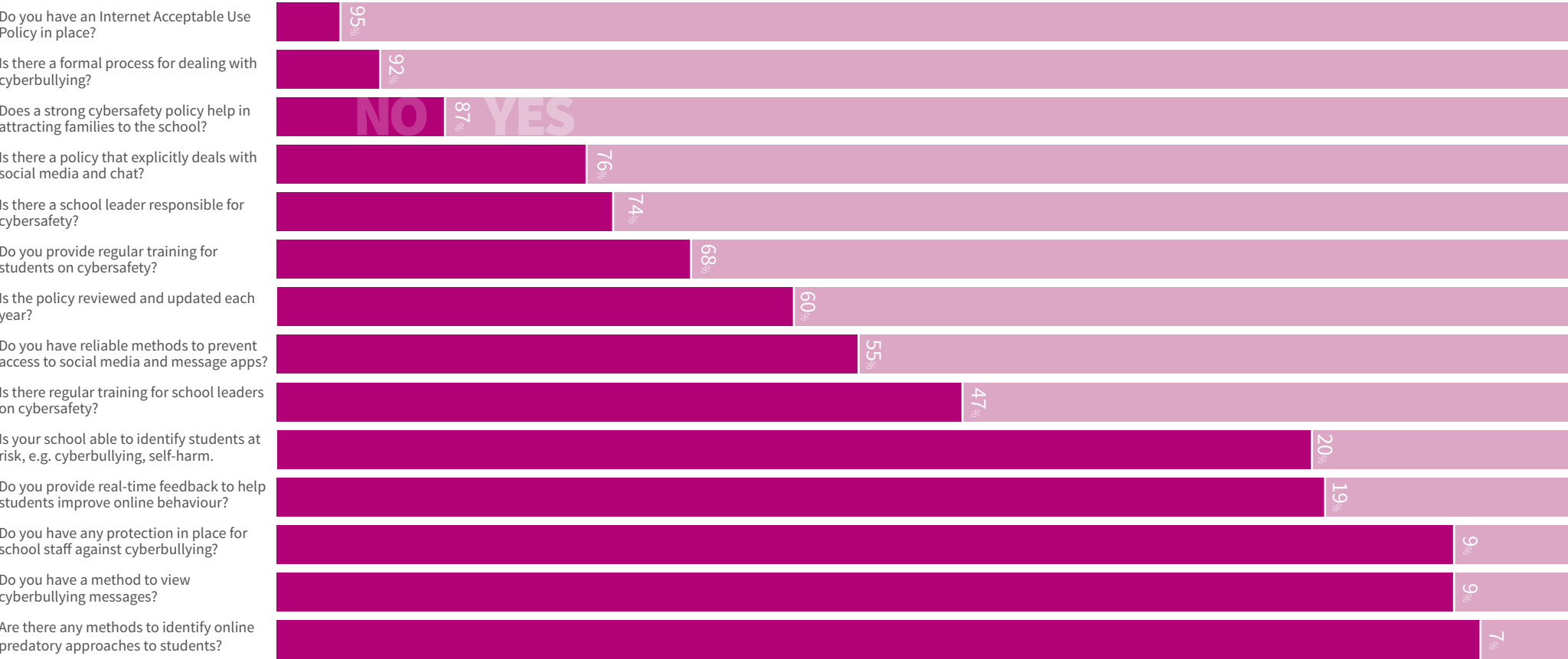
Research Finding 1

Student Wellbeing And Cybersafety Is A High Priority In Schools

In our discussions with schools it was clear that cybersafety is of growing importance. In follow up conversations schools expressed the need to improve the actions they are taking to tighten up the monitoring of behavioural indicators and the desire to help students and staff when required.

In the last few months cybersafety has become even higher profile due to initiatives by the Australian Government (for example the eSafety Commissioner) and other organisations that have developed resources to assist those in need. Further prominence has been attached to the subject after several high profile self-harm cases in schools linked to cyberbullying and other issues. Leading organisations such as the Alannah and Madeline Foundation and the eSafety Commissioner’s Office have been working with schools for years and provide programs and training resources to assist them improve their student wellbeing initiatives.

In our experiences in working with schools we are seeing cybersafety becoming a cornerstone requirement for school boards and councils to review. Thought leading schools are embracing a full suite of policy, training and education for students and staff coupled closely with behavioural monitoring tools to assist in providing early indicators of risk that can be addressed before escalating.

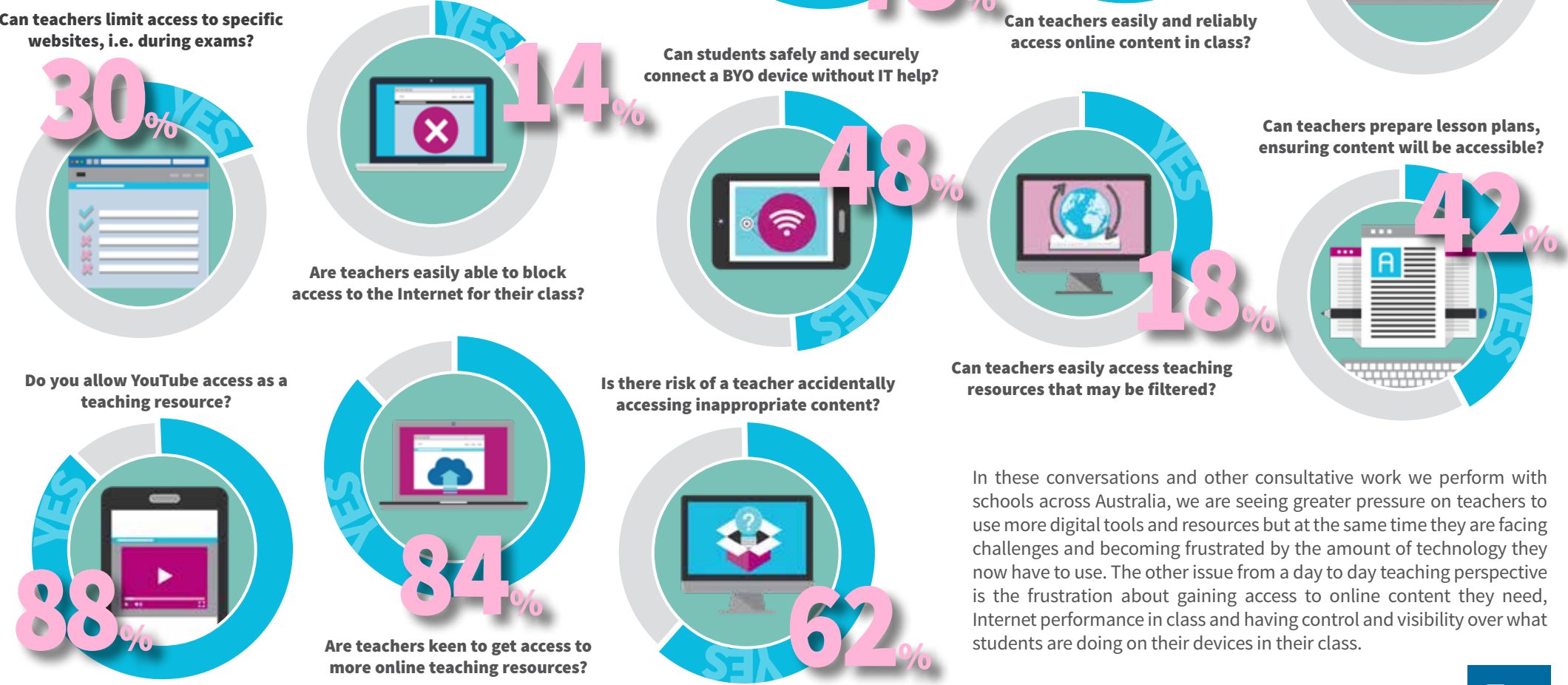


Research Finding 2

Flexible In-Class Content Control And Autonomy Is A Must For Modern Teachers

Teachers are facing increased demands in their classrooms. To enable successful learning outcomes, teachers require autonomous access to deliver content - both planned and reactive.

Enabling teaching and learning improvements through access to online tools and content is key and will also improve the wellbeing of teachers through reduced stress.

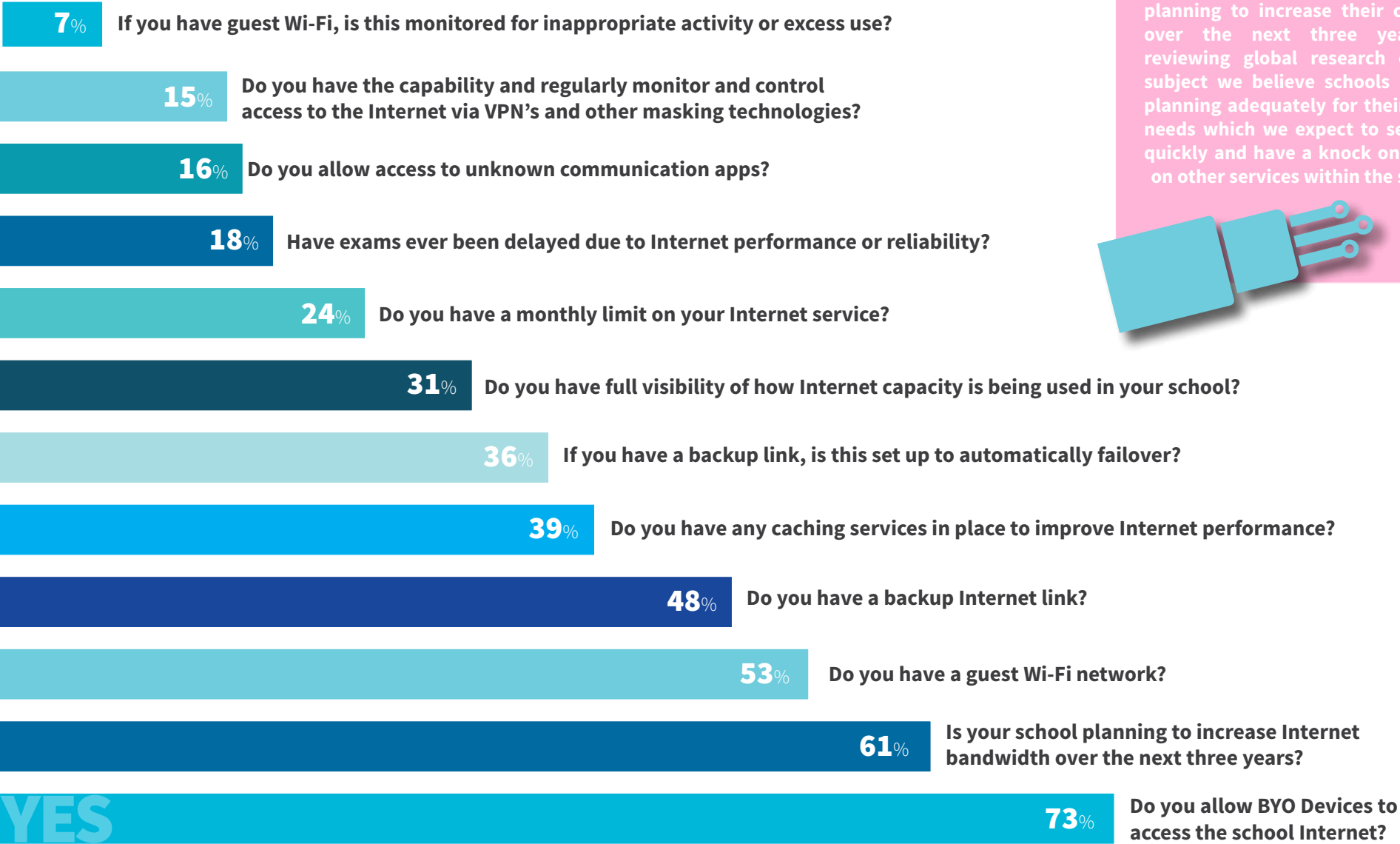


In these conversations and other consultative work we perform with schools across Australia, we are seeing greater pressure on teachers to use more digital tools and resources but at the same time they are facing challenges and becoming frustrated by the amount of technology they now have to use. The other issue from a day to day teaching perspective is the frustration about gaining access to online content they need, Internet performance in class and having control and visibility over what students are doing on their devices in their class.

Research Finding 3

Internet Capacity And Reliability Seen As Key,  
But Have Schools Planned Sufficiently For Future Upgrades?

CyberHound’s research found that the average Internet capacity provided by schools to each student is currently 0.24Mbps.



YES

# TREND ANALYSIS

CyberHound’s research team identified three key findings from its analysis with over 100 schools. These include cybersafety, class autonomy and Internet capacity.

These key findings have been broken down into trend analysis’ by State and School Sector and also includes independent research.

Although we have used a vast section of statistics nationally, we were unable to include Australian Capital Territory or Northern Territory in our research findings. We did not have enough data for these, but feel that the following content and findings will still be relevant and interesting to them.





Cybersafety Research

Much research is being published about the growing risks from online activity for children. This research supports our finding that cybersafety is a growing priority in schools across sectors and states in Australia.

Prevalence of self-harm and suicidal behaviour among 14-15 year olds, by gender



Thoughts of self-harm



Acts of self-harm



Thoughts of suicide



Plans for suicide



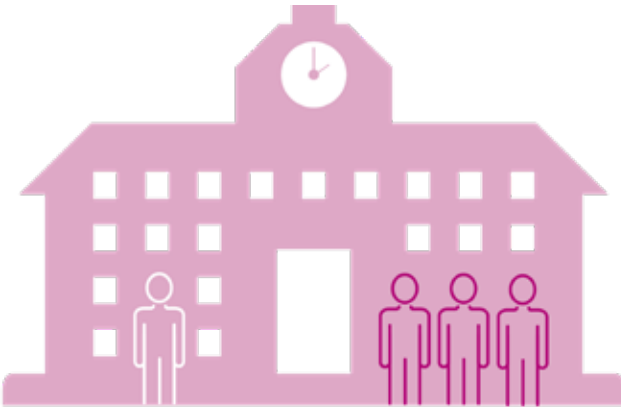
Attempted suicide

“Our research also tells us that young people are much less likely to use formal channels to seek support. Only 50 per cent of young people turn to family members for assistance, around 13 per cent will involve their school and only 12 per cent report to a social media website. Fewer still, two per cent, report to the police.”

Source - <https://aifs.gov.au/projects/growing-australia-longitudinal-study-australian-children>

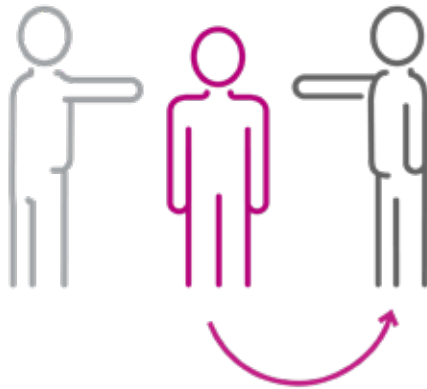
The economic cost of bullying

Bullying costs around \$2.3 billion



1 in 4 students are bullied at school

218,000 bullying victims become bullies



Those who bully are 3.5x more likely to instigate family violence

Source - <https://www.ncab.org.au/research/the-cost-of-bullying/>

# STATE STATE

New  
South Wales



South  
Australia



Western  
Australia



Queensland



Tasmania



Victoria



Is cybersafety and digital citizenship enablement important in attracting families to the school?

92%

95%

80%

100%

83%

41%

Do you have a policy in place that explicitly deals with social media and messaging applications?

73%

77%

80%

75%

83%

76%

Do have a method of picking up self-harm or predatory approaches from Internet based activity or communication?

0%

5%

0%

8%

0%

14%

Do you have a school leader responsible for the management of cybersafety?

40%

81%

40%

75%

83%

83%

Do you provide regular cybersafety training for students?

72%

68%

100%

58%

67%

69%

Do you have reliable methods to prevent access to social media and other messaging applications?

73%

63%

80%

59%

80%

79%

Is there regular training for school leaders on cybersafety?

64%

36%

40%

58%

83%

38%

CyberHound's research findings show that Private Schools are twice as likely to pick up at-risk online behaviour, such as self-harm or predatory behaviour, than Government Schools.



GOVERNMENT



PRIVATE

# GOVERNMENT VS PRIVATE

27%

SAID YES

60%

SAID YES

Do school leaders attend conferences and off-site Personal Development on cybersafety?

15%

SAID YES

29%

SAID YES

Is there any method of picking up issues such as self-harm or predatory approaches from Internet based activity or communication?

Only 35% of secondary and 28% of primary teachers have the support they need.

Source: Pearson - The Future of Education - How Digital are Australian Schools?

Class Autonomy Research

Educators across all segments feel that there is more drive than ever before to make greater use of technology in the classroom. So why is it that only 35% of secondary teachers claim they ‘have the support they need’ and only 28% of primary educators feel this way? It seems that there is a disconnect between what the educators want and the support and infrastructures being provided by schools.

Given that educators across all sectors feel there is more drive than ever before to make greater use of technology in the classroom, then it is clear that it is not a situation where there is resistance to the digital revolution. Rather, it seems that it is more a question of schools putting into place clear guidelines and policies on digital resource provision, delivery and maintenance, which is then implemented across the board at all levels.



Do teachers ever get frustrated by the Internet performance in class?

82% SAID YES

63% SAID YES

Do teachers want to use more digital content in class?

82% SAID YES

69% SAID YES

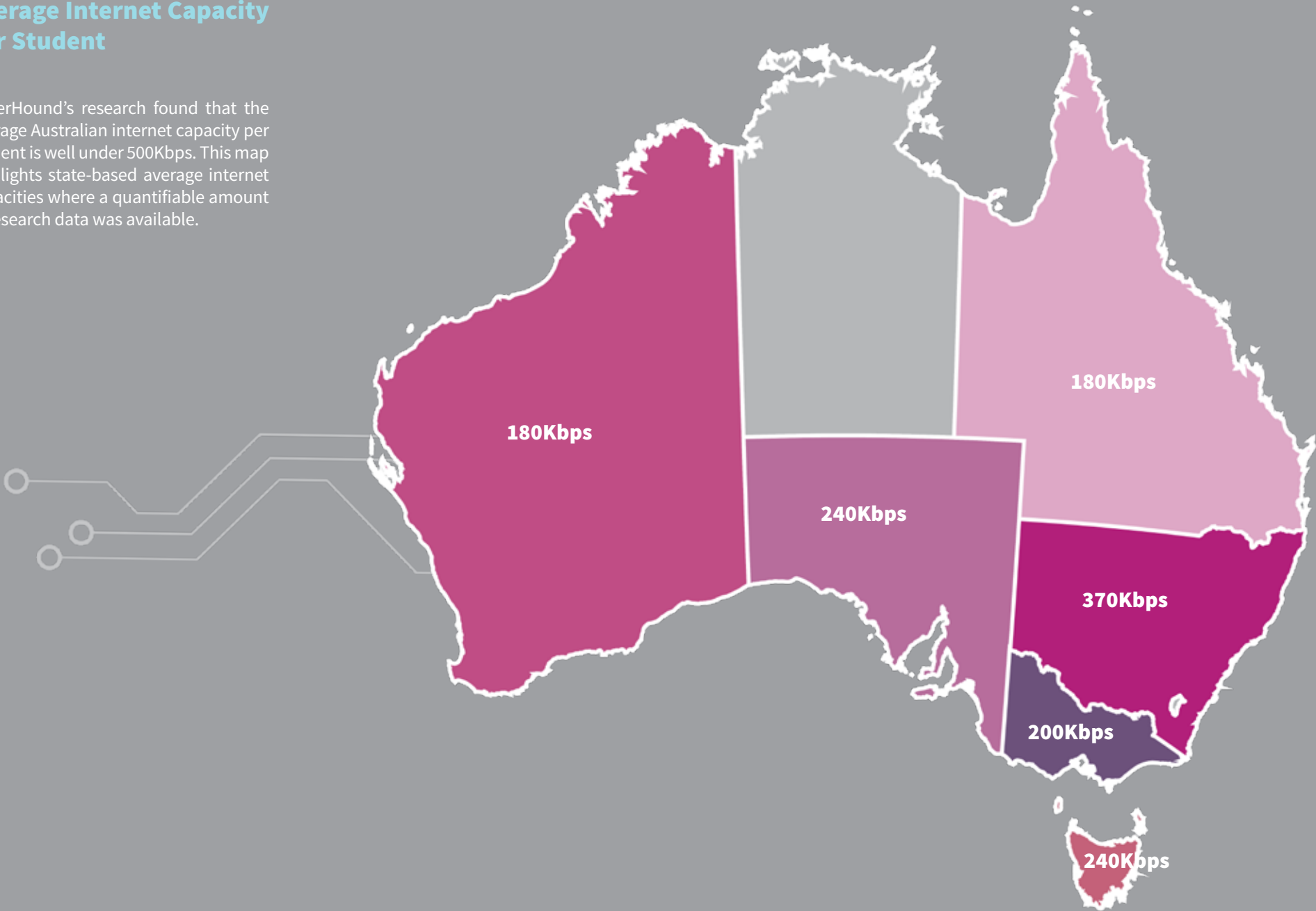
Educators have a strong interest in professional development using digital learning to increase student engagement and achievement.

		Do teachers ever get frustrated by the Internet performance in class?	Do teachers have full visibility of students' online activity?	Are teachers easily able to block access to the Internet for their class?	Can students connect a BYO Device to school Internet without IT assistance?	Can teachers easily access safe teaching resources in class that may be blocked?	Do teachers want to use more digital content in class?	Do you allow YouTube as a teaching resource?
New South Wales		64%	9%	9%	45%	9%	64%	91%
South Australia		73%	23%	5%	45%	36%	91%	91%
Western Australia		80%	40%	0%	40%	0%	80%	40%
Queensland		75%	42%	17%	75%	17%	83%	83%
Tasmania		33%	50%	33%	67%	33%	50%	83%
Victoria		83%	21%	21%	38%	7%	66%	90%



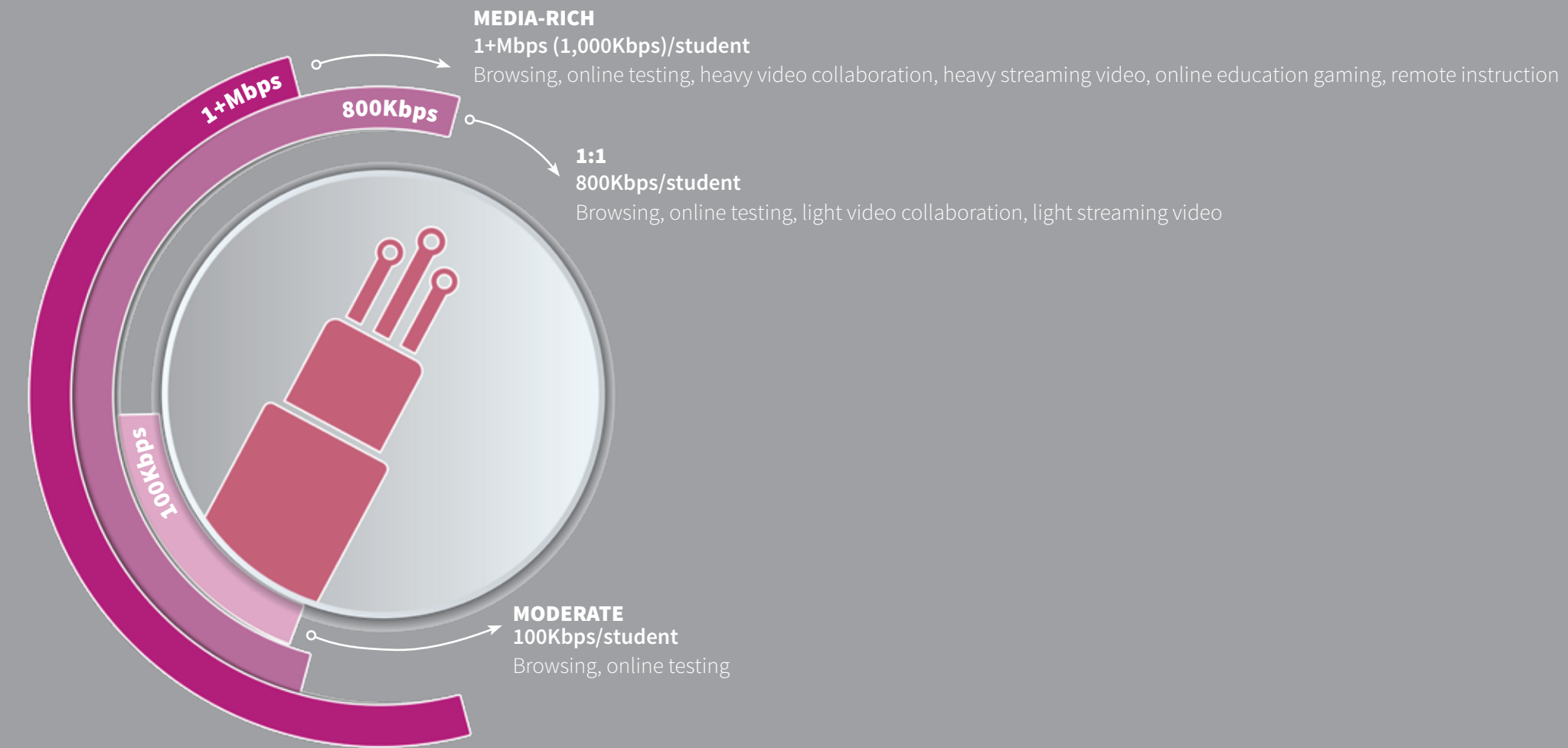
### Average Internet Capacity Per Student

CyberHound's research found that the average Australian internet capacity per student is well under 500Kbps. This map highlights state-based average internet capacities where a quantifiable amount of research data was available.



### Internet Capacity Research

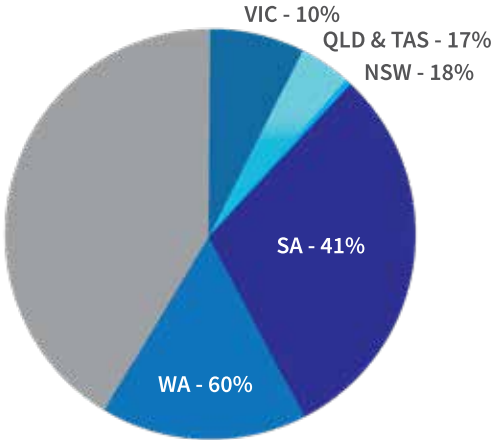
Research from the USA indicates significant growth requirements in Internet capacity.



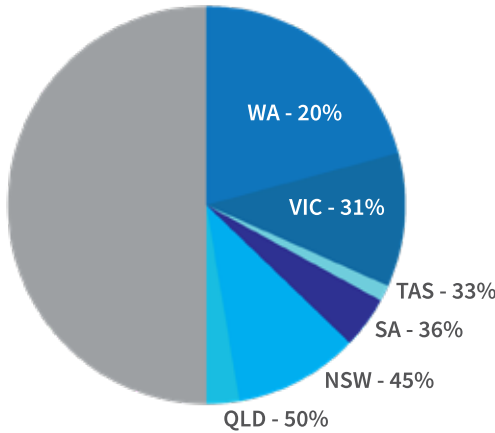


Internet Capacity

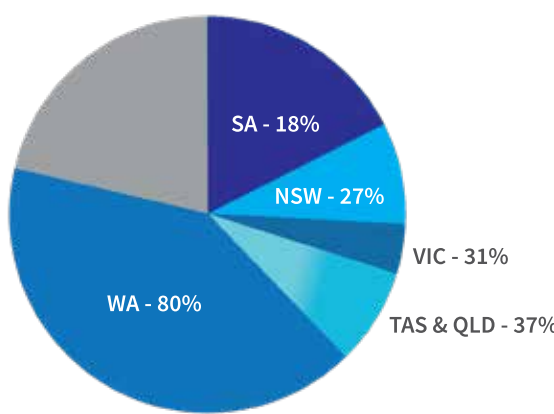
Schools with a monthly data limit on their Internet service:



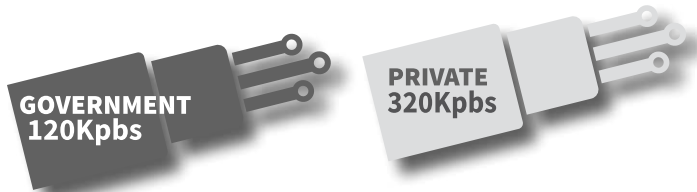
Schools that have a backup link that is set up to automatically failover:



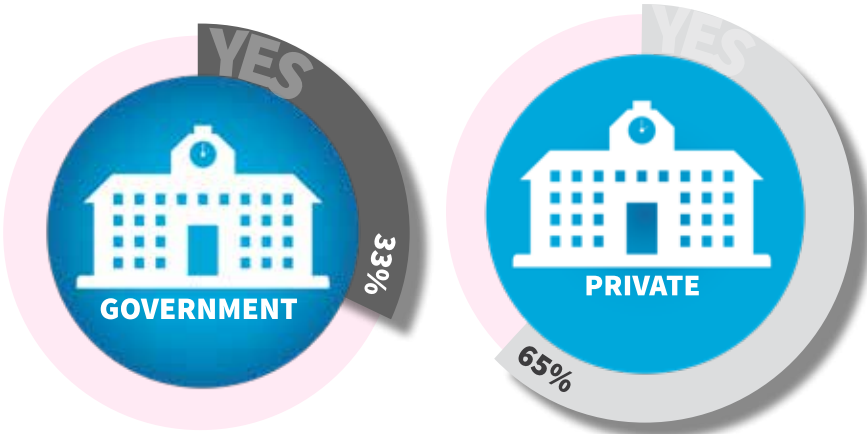
Schools with full visibility of how Internet capacity is being used in the school:



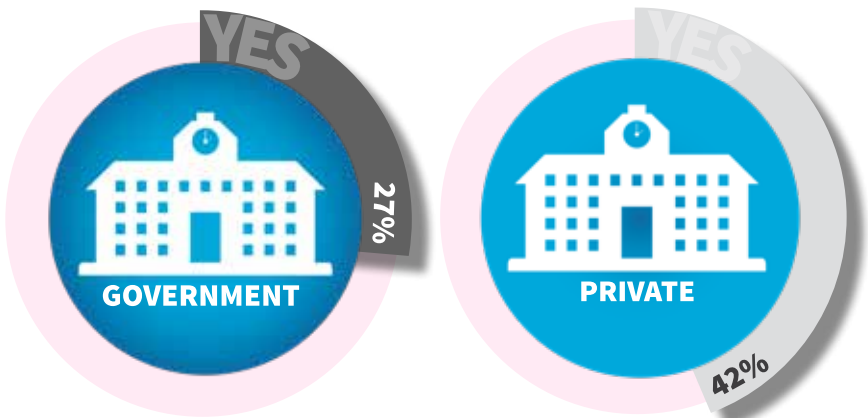
Internet speeds (per student)



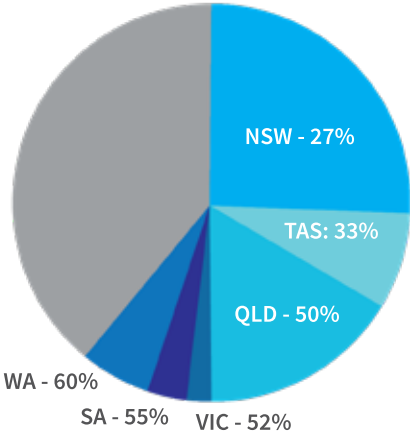
Do you have a guest Wi-Fi?



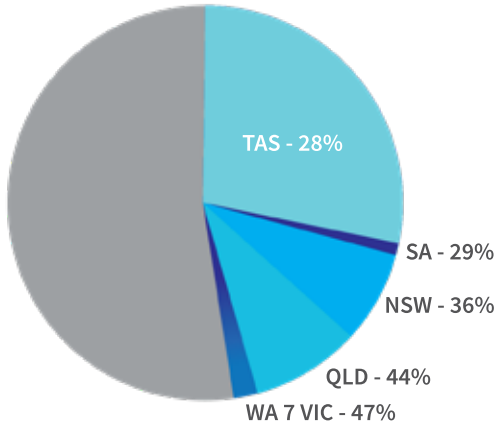
If you have a backup link is this set up to automatically failover?



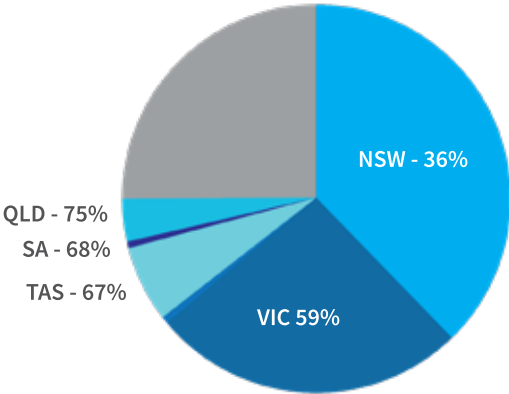
Schools with a backup Internet link:



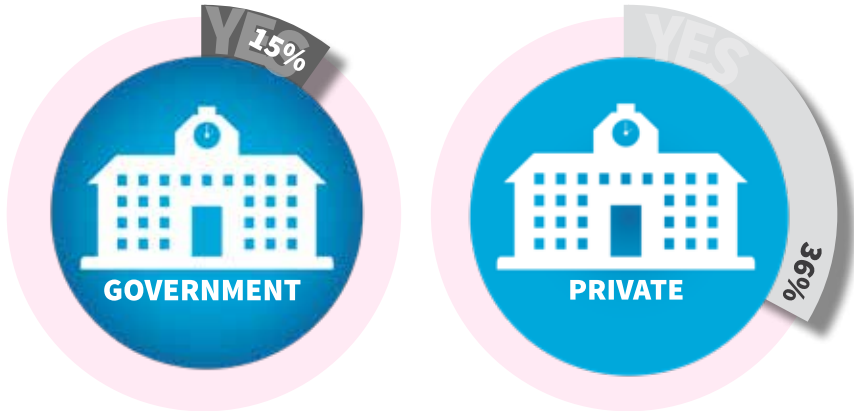
Schools with caching services in place to improve Internet performance:



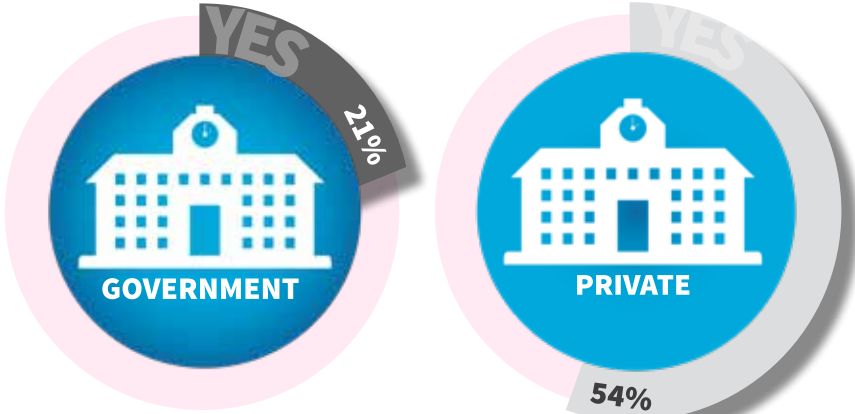
School planning to increase Internet bandwidth over the next 3 years:



Do you have a monthly data limit on your Internet service?



Is your school planning to add a backup Internet link in the next 12 months?



## Summary

CyberHound's research team identified three key findings from its analysis with over 100 schools.

Leading schools are continually implementing improvements in all areas of cybersafety. Many are now looking at how to enable teachers in classroom to utilise new digital learning tools and reduce the frustration of teachers. This will also lead to improved learning outcomes and more efficient and predictable delivery of the curriculum.

Both the cybersafety and classroom autonomy evolution findings are consistent with the independent research that our research team reviewed.

The surprising finding was the planning for Internet capacity increases. Independent research from the US and elsewhere indicates that Australian schools are already behind in this core infrastructure. As the Internet is becoming more and more the platform for learning, assessment, cloud services and student research, it is worrying that schools in Australia are falling behind their international counterparts.

In New Zealand, a government funded program that has been in operation for several years (delivered by N4L) is providing average Internet services of 290Kbps Internet capacity per student. As this has been in operation for over three years it is expected this may increase soon. This is already 21% more than the average found in our research in Australia.

The FCC research from the US indicates capacities of 100Kbps to 1,000Kbps per student are required to optimise learning and teaching opportunities in schools.

Our team believes schools should prepare for future increases in Internet capacity beyond what may currently be planned. Schools should continue to evolve cybersafety programs in the school and give teachers greater autonomy and control over online tools and activity in their classrooms to drive real learning benefits as well as reducing pressure on educators.



# CYBERHOUND

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