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Effective screen use in NSW schools: A Panoramic Framework for intentional technology decisions

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Contents

Executive summary **4**

Background **5**

A global picture **8**

The Panoramic Framework **10**

Positioning the Framework within existing departmental structures **12**

Conclusion and next steps **16**

Annex A. The Panoramic Framework in action 17

Annex B. Methodology 21

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Dr Jo Orlando is an Associate Professor at Western Sydney University whose work focuses on AI and digital wellbeing with a particular emphasis on the policies and practices that effectively support young people's uses of technology. Her current research projects relate to best practices with screens in NSW schools, AI literacy to support effective and informed AI use in education and digital wellbeing in Australian family homes. All these projects directly support government commitments, shaping policy and practice.

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Executive summary

New South Wales (NSW) schools face a growing policy challenge relating to technology in the classroom. Governments are moving to restrict some forms of student technology while simultaneously expecting schools to prepare young people for a digital and artificial intelligence (AI) future.

These objectives are not inherently incompatible, but require careful planning to ensure both can be met.

While schools have relevant policies, no clear framework brings them together to guide decisions about when, where and how technology should support learning.

THE FOUR DOMAINS

- Learning
- Safety
- Wellbeing
- Equity

Every Australian state has implemented some form of smartphone ban in government schools. Victoria is extending its ban to all schools from 2027. Concerns about the effects of digital technology on the safety and wellbeing of young people are also reflected in the Commonwealth Government's under-16s social media delay, which came into effect in 2025. Most recently, NSW has introduced limits on screen time in schools.[1]

At the same time, industry is calling for schools to increase technology use so young people can build the skills needed for future careers and life in a digital and AI world.

Evidence to guide schools on how to embed technology in curricula remains scarce. As a result, schools and governments are making high-stakes decisions without a shared way to weigh learning, safety, wellbeing and equity together. Existing policy, procurement, research and public debate treat these domains separately.

This paper introduces the Panoramic Framework, a practical framework that holds learning, safety, wellbeing and equity in view at the point a decision about technology is made.

With limits on screen time now in place, the central question for NSW schools is no longer only how much technology student use, but how they use it and whether that use is intentional, purposeful and genuinely effective for learning. The Framework helps decision-makers (including principals and teachers) assess when technology should be restricted, when it should be enabled and what safeguards are required.

Informed by international and national literature, a media analysis of the public technology in schools debate and interviews with the NSW Department of Education, the Framework is designed to sit alongside and connect existing policymaking tools used by the Department.

By adopting the Framework, NSW can ensure that decisions about technology are made intentionally, rather than reactively. It sets a clearer standard for technology governance that protects students while preparing them for a digital and AI-enabled future.

Background

Across NSW and Australia, governments are restricting young people's use of digital technology while also expecting schools to prepare students for a digital and artificial intelligence (AI) future.

Schools are facing a growing challenge: they must decide when to limit technology, when to embrace it and how to manage the risks.

Government direction to restrict young people's technology use is advancing quickly. In the past five years, every Australian state has implemented some form of smartphone ban in government schools. Victoria has since extended its ban to all schools, including non-government schools, from 2027.[2] They have also made moves to restrict 'bring your own device' policies in primary schools, and are expected to limit primary students' digital device usage other than where the Victorian Curriculum requires it. Secondary schools are expected to include planned device-free learning time in their teaching and learning programs.[3] NSW has also recently set limits on screen use for NSW public school students, to be mandated in 2028.

Young people's use of technology outside schools is also being blocked. In December 2025, the Commonwealth Government launched the Australian Under 16s social media ban, restricting that age group from holding social media accounts across selected platforms.[4] The ban responded to the mounting concerns of parents, educators and young people themselves about the harm technology was causing the younger generation, as reported by the Joint Select Committee on Social Media and Australian Society.[5]

At the same time, there is an equally urgent call to increase technology use for young people. This is industry-led and focuses on the need for young people to be equipped with the skills for future careers and life in a digital and AI world. Education Technology (EdTech) companies often move ahead of governments and school systems, both in the tools they release and in the claims they make about learning gains. This leaves schools under pressure to adopt new technologies before impartial evidence has caught up.[6]

The problem is not that governments sometimes restrict certain technologies and sometimes encourage them, it is that schools have to make decisions where learning, safety, wellbeing and equity do not always point in the same direction. A technology that improves engagement may also increase screen load, collect student data or widen the gap between students with different levels of support at home. A restriction designed to protect students may also limit legitimate learning opportunities. Current policy settings often address each domain separately, leaving schools to reconcile the trade-offs themselves.

> **…schools have to make decisions where learning, safety, wellbeing and equity do not always point in the same direction.**

State departments of education are reaching strikingly different answers to the same question: what role should technology play in teaching and learning? For example, in 2025 South Australia deployed EdChat across all public secondary schools to assist teachers in responding to student queries and, in some configurations, in place of classroom teachers.[7] At a similar time, NSW rolled out NSW EduChat to Year 5 to 12 students. This chatbot is built to respond to student questions with guiding questions, intentionally positioning AI as a prompt for critical thinking rather than a substitute for it.[8] These two technologies, while similar, reflect different implementations with different impacts on student learning.

A governance gap

Decision-making regarding EdTech has intensified dramatically in a very short period. The bans, together with AI, emerging technologies, new legislation and rapidly evolving social, educational and business contexts, have left schools without clear guidance on how to make effective decisions. This intensification has outpaced even the formal review processes intended to track it.

The Joint Select Committee concluded there is no silver bullet, acknowledging its own response as insufficient yet proceeding with the Commonwealth social media delay anyway.[9] Other governments, including the UK, Germany and Denmark, are taking steps to regulate access to social media: while the policies may be incomplete, doing nothing is no longer seen as acceptable.[10]

The NSW Premier's 2024 Social Media Summit, which preceded the Commonwealth social media delay, was convened in response to growing public concern about the impacts of social media on young people.[11] Rather than presupposing a single solution, the summit created space to assess the evidence, consider a range of policy responses and identify practical actions for government and schools.

Decisions regarding technology in schools made today will have long-term consequences for children's learning, wellbeing and engagement with technology. Many of the costs associated with poor decisions are not immediately observable but accumulate over time and across cohorts, shaping who benefits, whose wellbeing is supported, whose safety and privacy are protected, and whose learning is genuinely enhanced by the technology used in classrooms. By the time these consequences become visible, the decisions that produced them may already be embedded in policy, procurement and classroom practice. The Joint Select Committee's Final Report explicitly highlighted that multiple decision-makers are being asked to navigate these competing imperatives without a framework to guide decision-making or connect actions across the system.

Four domains key to the crisis

The education system has four simultaneous mandates: advance learning, ensure safety, protect wellbeing and maintain equity. These four domains both challenge and support the role of screens in school learning.[12]

Key sources - research, policy and international frameworks, and public debate - independently point to the same four areas, while a systematic review of policy shows that schools are required to address all four simultaneously. The research literature organises itself around these four areas, each with its own traditions, methods and success metrics. They are also consistent with the OECD Learning Compass, which together span the child's full educational ecology across these same dimensions.[13] These same four areas are playing out in the public media debate as well.

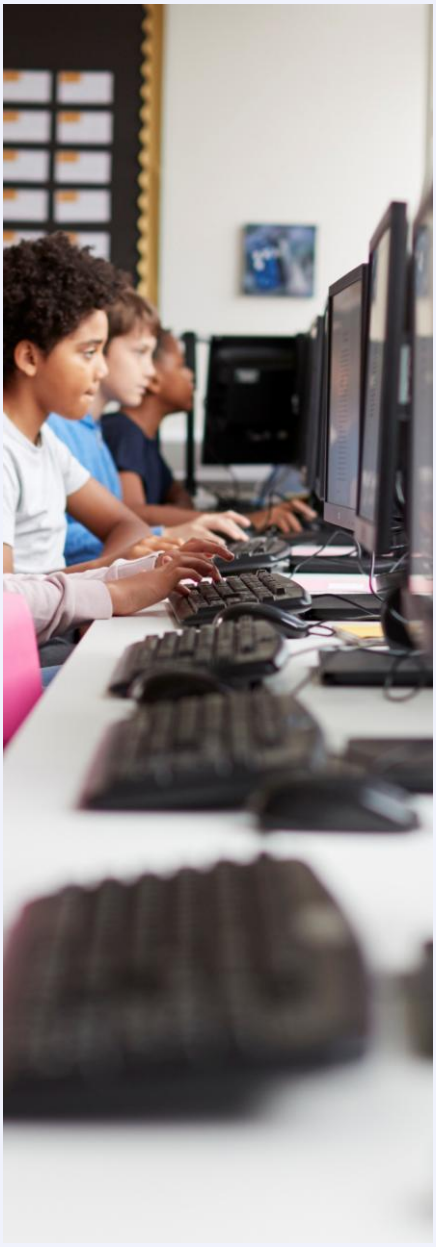
Learning: Schools are mandated to ensure that technology supports learning outcomes. This includes building engagement to boost learning outcomes in subject knowledge, digital capability and learning dispositions.

Wellbeing: Schools must consider how technology use affects children's internal capacity to focus, regulate emotions, sleep, function and flourish. This includes managing cumulative screen load across home and school, supporting attention and emotional regulation, and recognising that children experience home and school screen environments as connected rather than separate.

Safety: Schools must ensure that technology use, including by others, does not expose children to external risks to their safety, privacy or security. This includes managing in-app data collection and storage, protecting students from exposure to harmful content, and responding to emerging risks such as AI labelling and surveillance.

Equity: Schools must ensure that technology decisions do not advantage some students while exposing others to greater barriers, risks or harms. This means looking beyond whether students have access to devices and connectivity at home and school, to consider who benefits from a technology, who may be overexposed to it, and which families have the time, confidence and capacity to support and supervise its use.

A core issue is that each domain is backed by its own siloed government policy apparatus, emerging from distinct traditions, with distinct guiding frameworks and evidence base, and using different metrics to measure success. While each mandated domain is important, the reality for schools is that they must translate separate, disconnected policies and legislation into the single daily reality of their school.



A new approach proposed by the government

At the 2024 Premier's Social Media Summit, there was an explicit call for evidence-based, whole-of-child approaches. This was not the first such signal. In 2018, a federal scoping review prepared for the Schools Evidence and Analysis team identified that the siloed approaches to children's wellbeing were producing gaps that coordinated governance could address.[14] The NSW Government's Brighter Beginnings has since required a cross-agency approach to health, education, wellbeing and equity.[15] These signals suggest that policymakers are increasingly receptive to more integrated approaches. The remaining challenge is the absence of a framework capable of connecting decisions across domains and guiding technology implementation in schools.

The screen time limits now set for NSW public schools reflect a shift towards more deliberate governance. While limits address how much time is spent on screens, they do not necessarily ensure that the remaining use is intentional, purposeful and effective for learning.

This is where the Panoramic Framework contributes. When technology is used, the Framework supports decision-making that weighs use across learning, safety, wellbeing and equity to ensure intentional, purposeful and effective use.[16] It works alongside the limits, not against them, giving schools a way to make those decisions well.

The global picture

Recognition of the need for a holistic approach to EdTech decision-making is emerging globally. The OECD notes that divisions are widening as technology evolves at breakneck speed, and decision-makers are routinely left behind by the developers they are trying to govern; particularly challenging areas in EdTech are governance, teacher capacity and equity.[17]

European countries show uneven adoption of technology in schools, driven by fragmented national priorities and incomplete policy implementation.[18] Even in countries that have taken significant steps to address online safety, such as Canada and the UK, the multi-stakeholder collaboration, multilevel governance and combined regulatory and educational frameworks needed for effective online safety are still not in place.[19]

> **Integration across policy, conceptualisations, and support is what schools need. It is also what no system has yet achieved.**

A key challenge is that critical terms are not consistently defined, making it difficult to apply in a standard way across education systems.[20] For example, learning research and policy often use 'digital technologies' to refer to devices, platforms and their use in teaching and learning. By contrast, wellbeing, psychology and health literature often uses the term more narrowly, focusing on screen exposure, duration or intensity rather than the purpose or quality of use.

Most international frameworks focus on one domain at a time (Table 1).

OECD analysis of 29 jurisdictions globally shows that some focus heavily on learning, with some acknowledgement of equity.[21] For example, France's 2023-2027 Digital Education Strategy[22] and Ireland's 2020-2027 Digital Strategy for Schools[23] both centre on digital skills and resources. In these strategies, equity is framed mainly in terms of whether children have access to devices, such as laptops, and the internet, and does not address wider equity concerns including overexposure, family capacity to supervise use, or differences in who benefits from technology and who bears its risks.

Online safety frameworks, by contrast, generally focus on safety alone. For example, Australia's eSafety Best Practice Framework for Online Safety Education[24] and the UK's Keeping Children Safe in Education[25] each address safety without considering impacts on learning, wellbeing or equity.

Wellbeing is less developed in formal policy, with only one of the 29 OECD frameworks focused on it: New Zealand's Connected Ako: Digital and Data for Learning.[26] Wellbeing is, however, becoming more visible in debates over social media bans around the world.

Some frameworks cover two domains, and more coordinated frameworks, including the EU's Digital Education Action Plan (2021-2027)[27] and the UK Department for Education's Generative AI in Education (2023, updated 2025),[28] bring multiple concerns into view. However, they still tend to treat the domains sequentially rather than simultaneously.

This matters because a policy setting in one domain can strengthen, weaken or contradict a policy setting in another. This gap is now especially pertinent to NSW; with limits on screen time in place, a framework that responds to the current content and ensures that technology use is intentional and effective across all four domains is essential.

Table 1 | Overview of how international frameworks address the four domains for technology decisions in education.

Framework	Learning	Safety	Wellbeing	Equity	Considered together?
UK EdTech Strategy (2019)	●	◑	—	◑	-
UK Generative AI in Education (2023)	●	●	—	◑	sequential
EU Digital Education Action Plan (2021)	●	◑	—	●	sequential
eSafety Best Practice Framework (2021)	—	●	◑	—	-
NZ Connected Ako (2024)	●	—	◑	●	-
France Education Strategy (2023-27)	●	◑	◑	◑	sequential
Ireland Digital Strategy for Schools (2020-27)	●	◑	◑	●	sequential
Panoramic Framework for Intentional Technology	●	●	●	●	**simultaneous**

● Developed focus ◑ Partial / referenced — Not a developed theme

Coverage reflects each named framework only; domains may be addressed in separate policies elsewhere. Classification informed by OECD Digital Education Outlook 2023 analysis of 29 education systems.



The Panoramic Framework

The Panoramic Framework for Intentional Technology offers an integrated framework for EdTech decision-making in NSW schools. It holds the four domains (learning, safety, wellbeing and equity) in view simultaneously rather than addressing them in isolation. With screen limits now in place for NSW public schools, the question facing schools is no longer how much technology students use, but how they use it. The Framework addresses that question, ensuring that the technology use that remains within those limits is intentional, purposeful and effective across all key domains.

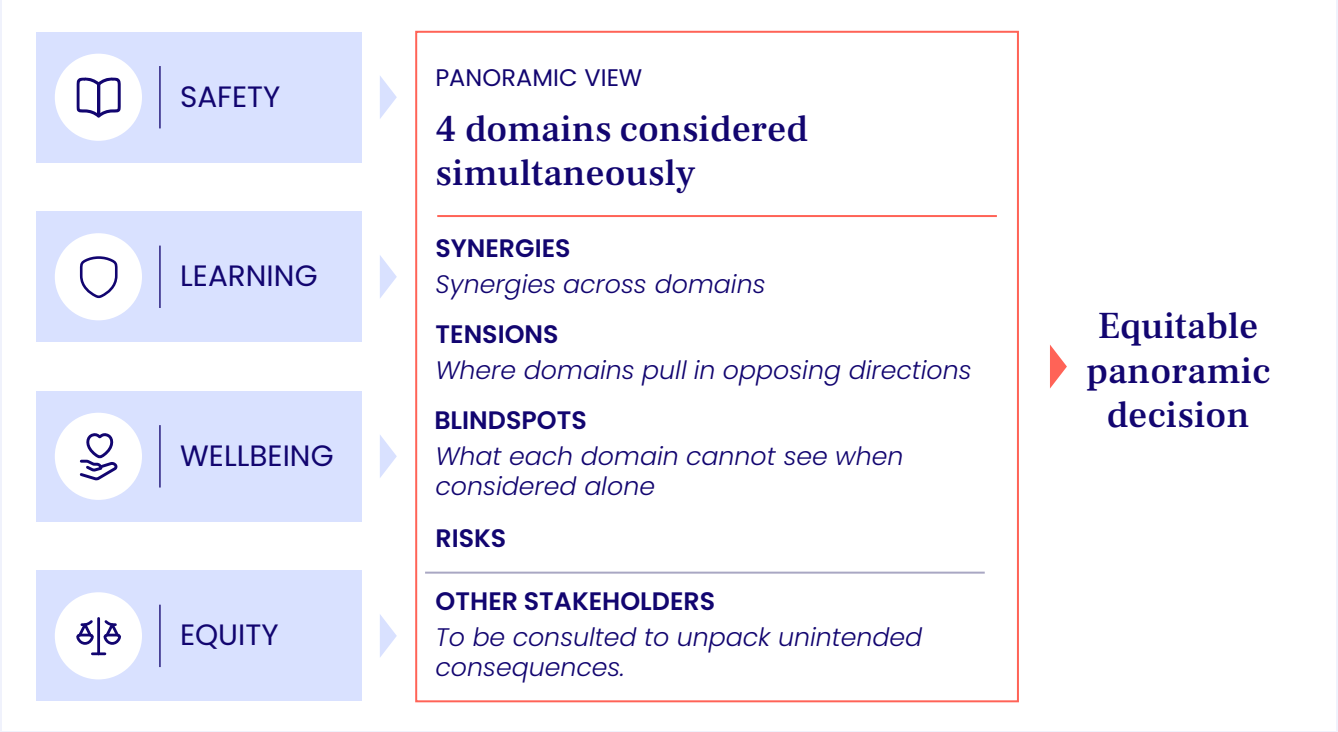
It is the outcome of a coordinated review of international and national literature on technology in education, a media analysis of public commentary and debates on technology and schools, and in-depth interviews with senior public servants in the NSW Department of Education.

This Framework is intended to serve as both a thinking tool and a record of the decision-making process, guiding decision-makers (policymakers, principals, researchers and teachers) through the questions to ask before making an EdTech decision. It provides evidence that the decision has been rigorously examined across all four domains.

Built on a sequenced line of questioning, the Framework surfaces how a decision affects multiple aspects of a student's life simultaneously, including consequences that often become visible only when something has already gone wrong.

Importantly, equity holds a dual position in the Framework. It is one of the four domains, each with its own line of questioning and consideration, but it is also the foundation underpinning the Framework as a whole. The Framework is designed to support our education system to deliver equitable outcomes for all students in the face of new digital challenges. Ultimately, the Framework is a tool that allows decision-makers to effectively interrogate the questions of who benefits, who is harmed and who is left out of this decision.

The Framework is designed to support more informed decision-making, not to produce a pre-determined answer. Rather than providing a simple recommendation, it helps decision-makers identify the key questions to consider and the stakeholders to engage before the decision is finalised. Annex A provides examples of the Framework in use.



The Framework



Q1.

What are you deciding on?

Q2.

Which stakeholder group does this decision primarily impact?

☐ Students ☐ Teachers ☐ Parents

☐ School ☐ Researchers ☐ Policymakers

Q3.

Which domain is driving this decision?

☐ Learning ☐ Safety ☐ Wellbeing ☐ Equity

Q4.

Examine the decision across all four domains.

The questions below are intended to guide responses to this question.

Learning | How will the use of this technology affect learning in the short and long term? What assumptions are being made about the impact of technology on learning?

Safety | What risks or vulnerabilities does the use of this technology create or reduce? Who is affected by hidden risks that may emerge over time?

Wellbeing | How will this affect students' internal capability to focus, pay attention and have the capacity to function? How will it shape the messages students receive about healthy technology use?

Equity | How will this affect established equity groups? How will it affect new equity groups, such as students who experience too much technology use or the wrong kind of access?

Q5.

Where do the four domains collide?

Is there a learning benefit that creates a safety risk? Or maybe an equity goal that undermines wellbeing? Name the collision and the student or group impacted.

Q6.

What blind spots emerged across the domains?

Which domains revealed issues you had not initially considered? What are the short- and long-term consequences of those blind spots?

Q7.

What can you change to reduce harmful consequences?

What conditions, safeguards, or adjustments would reduce the cross-domain harms? Who else needs to be in this conversation before the decision is finalised?

Q8.

On balance, the decision is:

The response should include the reasoning, including the trade-offs you have accepted and the rationale for each. How will you evaluate the effectiveness of this technology across the domains?

Positioning the Framework within existing departmental structures

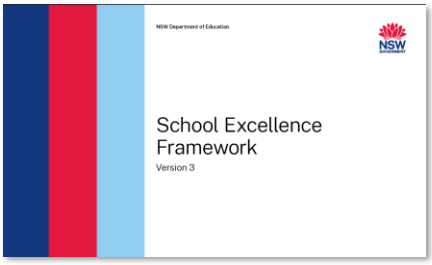
The effectiveness of any decision-support framework depends on its ability to operate within existing institutional arrangements. Policymakers consulted during this project consistently emphasised that implementation is more likely when new approaches align with established governance processes, policy frameworks and decision-making practices rather than requiring wholesale change.

In 2025, the NSW Department of Education began consolidating its technology-related policy documents to promote a more integrated approach to decisions relating to screen time, AI and digital technologies.[29] This provides the Panoramic Framework for Intentional Technology with an existing integrated structure and process for operating, as well as a mechanism for cross-domain consideration without creating a parallel governance system.



Way We Do Policy

The Panoramic Framework's four-domain line of questioning is designed to enrich the ecosystem scan phase by ensuring that policy work involving technology examines all four domains simultaneously rather than sequentially. The Framework's equity layer is consistent with the existing equity lens and extends its application directly into the technology decision-making.



School Excellence Framework

The Panoramic Framework can be incorporated into school self-assessment processes that already exist in the School Excellence Framework. When schools evaluate their progress against the School Excellence Framework's learning and wellbeing aspects, the Panoramic Framework can support more systematic consideration of the learning, safety, wellbeing and equity implications of technology-related decisions. This allows technology governance to be integrated into existing school improvement and accountability processes.



The Online Learning Tools Marketplace catalogue

While the Marketplace already evaluates online tools against individual domains, these assessments are conducted separately across the domains. The Panoramic Framework provides a way to consider how findings across domains interact and influence one another. It helps decision-makers make more nuanced assessments of technologies by identifying potential synergies and trade-offs between domains.

What the Framework supports

The Panoramic Framework for Intentional Technology provides a consistent basis for decision-making across the education system. While its eight core questions stay constant, the nature of the decisions it supports varies across system levels, from state-wide policy and school leadership to daily choices teachers make in classrooms. At every level, the Framework supports the goal of equitable and intentional decision-making about technology where a choice is weighed across the necessary four key domains rather than driven by one. At the policy level, it gives government a structured way to test how a proposed decision will affect learning, safety, wellbeing and equity, making trade-offs and unintended consequences visible while they can still be addressed, rather than after implementation. This section describes four applications of the Framework and illustrates how it supports more informed, transparent and balanced decision-making.

1

Policy decisions

At the policy level, the Framework can be used by government to design or review technology-related policy. For example, a state-wide social media response or an AI in schools policy.

Policy relating to EdTech is often developed under significant time pressure. Media scrutiny, parliamentary enquiries or high-profile incidents can accelerate policy development and narrow the focus of decision-making to the issue that triggered the response. In these circumstances, broader impacts and trade-offs may be overlooked and only become apparent during implementation.

The Framework can help policy teams consider these impacts before decisions are finalised. Its eight questions prompt a systematic assessment of how a proposed policy will affect each of the four domains, ensuring that opportunities, risks and trade-offs are identified early rather than left to schools to manage after implementation.

The Framework would strengthen the quality of policy advice by helping governments anticipate implementation challenges, surface unintended consequences and work through competing objectives before policy decisions are made. This enables policymakers to make more informed choices and provides a transparent rationale for those decisions.

2

Technology adoption decisions

At both the school and system levels, the Framework provides a structured approach to assessing whether, how, and under what conditions a technology should be adopted.

It can be applied to decisions involving apps, platforms, AI tools, monitoring systems and other digital products.

What the Framework enables at this level:

- A capture across domains of the rationale for adoption alongside the risks.
- A record that demonstrates the decision was considered, not assumed.
- Identification of which colleagues, including wellbeing leads, data privacy staff and equity specialists, need to be brought into the decision before it is finalised.
- A starting point for ongoing monitoring once the tool is in use.

By making assumptions, risks and trade-offs explicit, the Framework strengthens governance around technology adoption and provides a foundation for ongoing monitoring and review once a technology is in use.

3

International teaching

The Framework supports our understanding and practice of intentional teaching. In this context, intentional teaching refers to how teachers consider whether and how to use technology after weighing its likely effects on learning, safety, wellbeing and equity.

The alternative to intentional teaching is not technology-free teaching, but unexamined technology use that has not been tested across the four domains.

The Framework is agnostic about pedagogy. Whatever the teaching approach, the decision to use technology raises the same four-domain questions, and intentionality refers to that decision rather than a teaching style.

The Framework enables:

- A renewed understanding of intentionality that is responsive to the current context of AI and the rapidly changing context of technology in education.
- A reframing of intentional teaching with technology that acknowledges the current tensions surrounding its use in schools, and that enables the challenges and the opportunities to be considered in a way that keeps equity at the centre.
- A practical basis for teacher digital competence: the capacity to weigh learning, safety, wellbeing and equity together when deciding whether and how to use a technology with students.

4

Research design

The Framework can be applied by researchers when designing studies on the use of technology in schools. It provides a structured approach for examining the assumptions that shape research design, including which domains are being prioritised and how students, teachers and educational contexts are understood and represented.

When applied, it begins connecting the domains at the source, reducing siloed evidence and producing research that can be read and used more effectively as a better basis for policy in EdTech.

The Framework enables:

- Explicit consideration of which domains are reflected in the research design, and which may have been overlooked.
- Early identification of methodological blind spots, assumptions or unintended biases.
- Stronger representation of diverse student cohorts, educational contexts and experiences.
- Evidence that better reflects the complexity of technology use in schools.

For policymakers, this means access to evidence that is better aligned with the realities of technology decision-making, where outcomes in learning, safety, wellbeing and equity are rarely independent and must be considered together.

5

Research translation

As a research translation tool, the Framework could help researchers and policymakers communicate not just what a study found, but what the finding means for real decisions in schools.

It prompts translation products to identify the domain the evidence speaks to most directly, the domains it does not address, the assumptions being made, and the trade-offs that policymakers, school leaders, teachers or parents would need to consider before acting on the evidence. In doing so, the Framework would support more balanced and transparent communication about both the opportunities and risks associated with technology use.

The Framework enables:

- Research outputs that communicate findings within the broader context of learning, safety, wellbeing and equity.
- Translation that makes explicit the assumptions, limitations and trade-offs associated with research findings.
- More balanced public and policy discussions by reducing reliance on single-domain narratives.
- Greater consistency in how findings are interpreted across projects and programs.
- A more coherent body of evidence that can inform policy and practice.

A common instrument across different levels of decision-making

The Framework's value extends beyond any single decision-making context. Its contribution is the creation of a shared language for examining technology across the education system. Whether used by policymakers, school leaders, researchers or practitioners, it produces a transparent record of assumptions, risks, trade-offs and decisions that can be understood across levels of the system. This enables evidence, decisions and experiences to accumulate rather than remain siloed within individual projects, organisations or sectors.

The result is a more coherent approach to educational technology policy and practice, with a common framework for understanding how decisions are made and evaluated.

Conclusion and next steps

This paper highlights three important points. First, technology decisions in NSW schools are being made under conditions of acute fragmentation, across institutional domains and public discourse. Second, this fragmentation is producing a governance crisis: decisions that address only concerns in one domain can create unintentional harms in other domains, which only become visible when learning, safety, wellbeing and equity are considered together. Third, what is missing is an integrating mechanism, a structured way of holding all four domains in simultaneous view when a decision is being made.

The Panoramic Framework for Intentional Technology is a response to that gap. It is research-derived and built to align with the existing structures the Department has already invested in. It is both a thinking tool and a record of that thinking. It does not promise easier decisions but rather leads decision-makers to better-informed ones.

Next steps

To advance the Framework to implementation, there are several steps that the NSW Department of Education and broader Australian education system can take:



STEP 1

Apply the Framework to support implementation of screen time limits. With limits now set, schools face daily decisions about what technology use is worthwhile. The Framework can be provided to schools as a practical tool for making those decisions well to ensure that screen use in schools is consistently intentional, purposeful and effective across all four domains, rather than leaving each school to work that out alone.



STEP 2

Translate the Framework into accessible formats for different audiences. For example, a one-page version for classroom teachers, a planning tool for principals and a parent-facing version for community conversations. This will ensure that the Framework is used at various points in the decision-making process.



STEP 3

Integrate the Panoramic Framework into department policies, including The Way We Do Policy, the School Excellence Framework, the Online Learning Tool Marketplace catalogue assessment process and the consolidated technology policies. This facilitates cross-domain consideration as a standing requirement.



STEP 4

Adopt the Framework as a tool and resource that research funded by the Department of Education uses. An immediate application would be in the Screen Use and Addiction Research Fund to ensure findings are reported across all four domains. The Framework could support NSW in building coherent, evidence-based guidance for schools, parents and policymakers.



STEP 5

Establish a national conversation, about cross-domain decision-making frameworks for technology in schools. International evidence shows this is a global gap and NSW has an opportunity to lead in addressing it. The Framework could form the basis of a national conversation with other state and territory education departments and could go on to inform the Australian Government's Australian Framework for Generative AI in Schools.

Annex A. The Panoramic Framework in action

The Framework's purpose is best understood through application. The worked examples are drawn from the kinds of decisions stakeholders described in interviews.

EXAMPLE 1

A new maths app is being considered for adoption by a metropolitan primary school. The Framework is being completed by the classroom teachers who will be using it.

Q1. What are you deciding on?

Adopting a gamified maths app to lift student engagement and learning outcomes.

Q2. Which stakeholder group does this decision primarily impact?

☒ Students ☐ Teachers ☐ Parents ☐ School
☐ Policymakers ☐ Researchers

Students in Years 3 to 6.

Q3. Which domain is driving this decision?

☒ Learning ☐ Safety ☐ Wellbeing ☐ Equity

Q4. Examine the decision across all four domains.

Learning (driving)

Gamified practice lifts engagement, but engagement is not the same as learning.

- *Gamified tasks can be engaging on the surface and shallow underneath, leaving students with little applied understanding.*
- *The students in these year levels already use multiple gamified apps. This adds another.*
- *Built-in features like calculators can become shortcuts. Students get the right answer without doing the thinking the maths is meant to develop.*
- *Students often play with the app's entertainment features rather than focus on the learning.*
- *The app is one tool among many. If it becomes the default every lesson, students may get bored and tune out.*

Safety

The safety concerns are not only about the app itself, but about whether students can navigate it:

- *The app collects detailed usage data on every student. This is on top of the data every other app used by this group of students collects about them. Is this still a safe situation for students?*
- *Can students, parents and teachers sufficiently judge what data they are agreeing to be collected and how it will be used by the app?*
- *The school's broader environment matters. If trustworthy sites are blocked while distracting content remains accessible elsewhere, are we giving the correct message about intentional technology use for learning?*

Wellbeing

The wellbeing trace surfaces concerns that compound across home and school:

- *Students describe difficulty turning devices off. Some use the language of addiction.*
- *Many children in the school already have extensive screen time at home, often from gaming. The app adds even more quick reward type of content.*
- *Competitive features like points and stars drive social comparison and can reduce in-person connection between students.*
- *Students need adults to help them refocus when their attention drifts. If the teacher is managing 25 other students, that help is not consistently there.*

Equity

Equity is about more than access. The trace surfaces a wider set of equity concerns:

- *Some students may not have access to the app at home. They may not have access to a device or may share a single device with siblings or parents.*
- *Some students have a device at home, but no adult present to supervise or monitor their use of the app.*
- *Some students may not have consistent access to the internet or have slow internet at home that fragments their learning.*
- *Some students arrive at school having already spent a long time on screens at home. For these students, the school's app may add to an already high screen load*

Q5. Where do the four domains collide?

Learning and equity collide because the app assumes home practice, but not all students have a device, connectivity or adult supervision at home. Learning and wellbeing collide because the app necessitates more school and home device use when some students in this cohort are already overly saturated with gamified, quick reward type of content. Learning and safety collide because students' extensive app and game use means that the data collection that drives the app's personalisation adds to an already heavy data load for students across all the apps they use.

Q6. What blind spots emerged across the domains?

The app is being chosen for its learning benefit, however this benefit is not guaranteed. Gamified features can displace learning with entertainment. There are groups of students in Years 3-6 who arrive at school after spending long hours gaming at home, and with minimal adult support at home to help them self-regulate. These students will be amongst those most disadvantaged by the decision to use the app in school. The app risks an added burden for children whose capacity to focus may already be depleted.

Q7. Before you decide, what can be changed to reduce possible harmful consequences?

- *Evaluate what the app teaches versus what it just rewards.*
- *Consider optimal scenarios for how long the app could be used in class and the time of day it is used.*
- *Survey parents about home screen use to find out which children are already arriving saturated and adjust the plan accordingly.*
- *Bring the wellbeing team in early to watch for compulsive use patterns.*
- *Bring the equity team in to plan for students without home device access or adult supervision at home.*
- *Read and agree that the app's data and privacy terms are suitable and acceptable for student safety in the short and long term before signing.*
- *The decision is not whether to use the app, but whether the school has the conditions in place to reduce harms and therefore use it well.*

Q8. On balance, the decision is:

To proceed with the app, but not as a whole class, every lesson resource. To ensure cross-domain safeguards are put in place, app time will be capped and targeted to the students and topics it can genuinely help with. The app will not be used in homework tasks. Overuse, or use that appears to be primarily for engagement rather than learning, will be monitored in class. The teacher's observations, not the app's engagement data, should be used as the measure of its positive impact. The panoramic view does not change the decision from yes to no; it changes from adopt to adopt with conditions.

EXAMPLE 2

A school is looking to launch a new online program for parents. The program will provide education on cyber safety.

Q1. What are you deciding on?

Replacing the annual cyber safety information night with an online course for parents. The decision is driven by poor attendance at evening events. The new course will be self-paced, accessible at any time, and will cover the same content the evening session used to deliver.

Q2. Which stakeholder group does this decision primarily impact?

☒ Students ☐ Teachers ☒ Parents ☐ School
☐ Policymakers ☐ Researchers

Parents, and through them, their children.

Q3. Which domain is driving this decision?

☐ Learning ☒ Safety ☐ Wellbeing ☐ Equity

Q4. Examine the decision across all four domains.

Safety (driving)

Parents have told schools they need help with identifying and managing the risks their children face online: Gamified tasks can be engaging on the surface and shallow underneath, leaving students with little applied understanding.

- *Students encounter inappropriate content unintentionally at home.*
- *Parents worry about unknown online contacts, scams, image-based harm and cyberbullying.*
- *Children's technical skills are outpacing parents'. Parents describe themselves as making it up as they go.*
- *Parents want shared responsibility with schools, not a one-off session once a year.*

Learning

Parents have also told schools they want help knowing what is going well, not just what to be afraid of. The course should not just address online safety, but should also share information that parents are seeking out:

- *Parents are uncertain whether the technology being used at school is advancing their child's learning.*
- *Parents want to know how to support their child to use technology well, including how to use AI to support thinking rather than replace it.*

If the course only talks about risks, parents will complete it knowing what to block, but not what to encourage.

Wellbeing

Parents describe themselves as drowning in trying to manage their children's screen time. A safety-only course can reinforce that:

- *Parents are exhausted and already feeling out of their depth. Another long list of dangers adds to the overwhelm.*
- *Parents are getting mixed messages from the media, government, schools and other parents. A course that only adds to the risk talk reinforces a hopeless picture.*
- *Parents feel judged if the tone is corrective. If the content does not represent the reality of home life, parents lose trust in what the school is telling them.*

Equity

An online course assumes that all parents have the same access, time, language and confidence to complete an online course. It may not adequately account for:

- *Parents whose first language is not English, who may find an English-only course difficult to follow.*

- *Parents with low digital confidence or lacking in connectivity may struggle to complete a self-paced online course.*
- *Parents who already feel judged about their child's screen use may avoid the course altogether.*

As a result, the parents that the school most needs to reach are the parents least likely to finish.

Q5. Where do the four domains collide?

Safety and wellbeing collide as a course designed to inform parents should make parents more capable, not more anxious. Equity and learning collide because the parents least likely to attend the course are the parents whose children need parental support the most. Safety and equity collide because the delivery mechanism reaches the parents already engaged and excludes the parents the school is trying to reach.

Q6. What blind spots emerged across the domains?

It's important for the school to address the attendance problem, but the real problem is actually what the course says and how it is experienced by parents. If the course only talks about risks, it adds to the overwhelm parents are already feeling and reinforces the mixed messages they are getting from everywhere else. If the content is outdated, or the tone is corrective, parents complete the course knowing what to be afraid of but not what to do, and they trust the school less, not more.

Q7. Before you decide, what can be changed to reduce possible harmful consequences?

Balance the content. Include what good technology learning looks like alongside the risks, so parents finish the course with a clearer picture, not a more frightening one. Check that the content is current, not pulled from outdated sources. Audit the tone so it reads as support, not judgement. Design the course in short modules in the languages spoken in the school community. Pair the course with classroom-based parent-child activities so the learning happens through the child's school day. Track engagement by demographic, not total reach. Bring in an equity specialist, a community engagement officer, parents from the communities the evening events did not reach, and a wellbeing lead to review the tone and framing. The decision is not whether to run the course, but whether the course gives parents what they actually need.

Q8. On balance, the decision is:

Not to proceed with the full course as planned. The trace surfaced too many concerns across learning, wellbeing and equity for a whole-of-school roll-out. Another option could be to trial a short module on a topic that parents have clearly identified as a need, redesigned with balanced content, tone and language adjustments. Ensure the trial includes parents who may be potentially disadvantaged because of the new format. If the course reaches only the same parents who typically attend the information night, the format may not be a useful alternative and the school needs a different approach.

What the examples demonstrate

The examples show that decisions framed as learning or safety rarely affect only one domain in practice. Tracing each decision across learning, safety, wellbeing and equity reveals risks, trade-offs, and implementation requirements that would not be visible through a single-domain assessment alone. It also highlights how the groups intended to benefit from an intervention may experience unintended impacts if these broader considerations are not examined.

The Framework does not determine the decision. By requiring systematic consideration of impacts across all four domains, it helps decision-makers identify key risks, engage the right stakeholders, and put appropriate safeguards and supports in place before implementation. The result is a more informed, defensible and transparent basis for action.

Annex B. Methodology

The Panoramic Framework for Intentional Technology is the outcome of a coordinated review of three evidence sources: international and national literature on EdTech, a media analysis of broader public commentary on technology and schools and in-depth interviews with senior staff across the NSW Department of Education.

International and national literature

The literature showed that no single policy domain can resolve EdTech questions in schools alone, and that no existing framework yet brings learning, safety, wellbeing, and equity into integrated view. This is the structural problem the Panoramic Framework is designed to address.

Media analysis

A media analysis of student technology use in schools was conducted across major mainstream Australian media outlets over 18 months across 2025 and 2026. Coverage was identified through systematic database searches and categorised according to which of the four domains was foregrounded in each piece: learning, safety, wellbeing or equity. The analysis captured how the issue is framed publicly, which voices are heard, which voices are not and what aspects dominate the public conversation.

The pattern was clear, public debate in this field is heavily polarised between 'restrict' and 'adopt' positions. Safety and wellbeing drive the restrict narrative. Themes that dominate include children losing outside play, impacts on children's ability to pay attention and concentrate, impacts on sleep and impacts on real-world social connection due to technology use. That argument is then carried into schools, framed as a need to protect what is left of children's school time from the same losses occurring outside it.

The 'adopt' narrative is framed around what children stand to lose in the future if they are not equipped for a digital and AI world. This includes up-to-date learning, workforce readiness and the need to keep up with technological change. Equity appears only as an afterthought and is most often framed as a question of access.

The media analysis confirms that the fragmentation observed in policy is also present in public discourse, and that the public framing is currently incapable of holding all four domains in view simultaneously.

Interviews

Eight in-depth, semi-structured interviews were conducted with senior executive staff across the NSW Department of Education in 2026. Participants were selected purposively to capture senior voices from across the four domains and from the policy, strategy and operational layers of the Department.

The group included a head of strategic policy, schools policy team members, domain specialists representing each of the four domains (equity, wellbeing, cyber safety, and learning specialists), and senior strategists working on technology intervention strategies with schools. The aim was to capture perspectives from across the levels at which technology decisions are actually made.

Interviews were conducted independently. Each conversation allowed the interviewee to speak from their own experience and expertise. Transcripts were thematically coded against the four domains, with particular attention to where domains were identified as colliding.

Across the interviews, the need for integrating mechanisms across all four domains was surfaced. This convergent finding is the empirical foundation of the Panoramic Framework's central premise.

Equity and the Panoramic Framework's design

The position of equity within the Framework is two-fold and key. Equity is named as one of the four domains to ensure it receives the same focused attention as learning, safety and wellbeing. Without that standing, interviews with Department of Education participants suggested it risks becoming an assumed outcome; a value that everyone endorses but no dedicated part of the process is responsible for. At the same time, equity is the reason the Framework exists. When all four domains are considered together, the result is a decision-making process that is equitable by design.

The Framework is designed to fit the way the NSW Department of Education actually works. The interviews made clear that decision-makers in schools are time-poor and operating under framework fatigue.

The value of the Panoramic Framework depends on being lightweight, embedded and decision specific. It is designed to work alongside the structures that already exist in the Department, including The Way We Do Policy, the School Excellence Framework, the online marketplace's tool assessment process, and the technology and school policies currently being consolidated. It does not replace but rather connects these resources.

The Framework is not a theoretical proposition. Every question it asks is traceable to specific findings from the literature, the media analysis, or the interview data. It is a research-derived instrument, designed for the specific structural gap the evidence base identified, in the specific institution that needs to fill it.

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