Schools Digital Strategy

To be an education leader in a digital world.

NSW
GOVERNMENT

Digital innovation is reshaping our world. The workforce of the future will require people who have received the highest quality education, regardless of circumstance. This is a fundamental goal for the NSW Department of Education.

The Department of Education is committed to equipping our students with the skills they need to excel in the jobs of the future.

We have an obligation to prepare our students for a complex world that is rapidly changing. We know routine jobs will increasingly be automated and our school leavers will need different skills in their work.

Future work will require higher levels of digital literacy, stronger critical thinking skills, better problem solving skills, and a culture of collaboration based on interpersonal aptitude in both the real and digital worlds.

Some of our schools excel in how they provide these skills to our students. Others still require the digital resources and professional development to make this a reality.

Many schools have implemented world-leading practices for the use of digital but the majority report they are still using practices that are manual and time consuming, impacting time focused on students.

Our challenge is to ensure all schools benefit from the opportunities digital innovation offers.

We will equip every teacher with appropriate digital tools and access to a suite of professional development to leverage digital for excellent teaching and learning.

We will move to equitable access of digital resources for all our students at age-appropriate levels. An upgraded network will remove location and bandwidth barriers to accessing the best resources and the highest quality education.

We will digitise school administrative processes and provide significant investment to train our school leadership, support staff and teachers in digital adoption – and support them with new digital officers in our schools.

The experience of parents & carers interacting with schools will become seamless across all channels, enabling them to participate at any time in their child's learning journey.

We know that doing this can make learning more engaging, effective and accessible to more students, and, most importantly, improve learning outcomes.

Over the following pages, we share our vision, describe what success looks like, detail the case for change, and set out our plan of action.

Our Vision

To be an education leader in a digital world.

To be recognised as a leader in education through our delivery of integrated digital learning, teaching and school operations to maximise student outcomes.

Our Vision

To achieve our vision of becoming Australia's best education system and one of the world's finest, it is essential that our schools, staff and students have equitable access to the highest quality teaching and learning resources.

To deliver on that vision, we must leverage new and emerging technologies to drive efficiencies, and improve the way we work and the way our students learn.

Many of our schools are already using digital tools and learning management solutions to improve student outcomes. The benefits of these new, digitally-enabled approaches are evident wherever they have been applied.

These schools are effectively leveraging digital tools and resources to improve teaching and learning outcomes. These opportunities and benefits, however, are not being realised uniformly, due to uneven levels of awareness, access, experience and expertise.

Teachers, school leaders and others have also told us that increasing compliance, manual processes and an inequity in resource availability are all impacting the quality of education we are delivering for our students.

We will partner with schools, teachers, parents and carers to enable digital teaching and learning experiences.

- Students have access to rich digital learning resources so they receive the highest quality learning experiences regardless of where they are, their background or ability

- Teachers have the skills, knowledge and capacity to access the best resources and to apply digital within the learning environment where appropriate

- Parents are able to communicate, interact and transact with schools through a range of digital channels and partner with schools on their child's education journey; and

- School leadership, support staff and teachers have the training, tools and platforms that streamline processes, enhance their skills and give them time back to spend with their students and colleagues.

We will continue to improve our customer experience and align to the NSW Government's Customer Service directions, to allow citizens a single view of Government.

This means integration with Service.NSW and providing core platforms that make it easier for the citizen to interact with education services.

What do we mean by digital innovation in education?

Digital innovation in education means maximising the skills, processes and technology platforms that, when combined and integrated effectively, enhance teaching and learning experiences and streamline school management and student administration processes.

Digital innovation will help us nurture our students' abilities and build their confidence to excel in a rapidly changing world.

Developed for and by schools, teachers and students, the Schools Digital Strategy is a plan for achieving an education system that maximises the impact and value of digital innovation.

It aligns to the goals of *digital.nsw* to improve customer interactions with Government and to be digital by default. It is designed around user needs, to make services more integrated, seamless and accessible.

Digital transformation is happening in all spheres and will reshape education. We need to increase our digital maturity to make the most of the opportunities available today and those ahead. We must ensure our organisation is prepared for digital and continues to be digitally relevant - on the inside, and from the outside.

When we do this well, we will:

- Improve digital equity and access for every student and teacher

- Ensure all schools have access to high quality teaching and learning resources to improve learning outcomes

- Improve the experience of those interacting with our schools

- Give time back to our teachers and staff and make the department a great place to work

- Improve school and student administration efficiency

- Generate better insights and data-supported decisions, enabling personalised learning and assessment capabilities

- Seamlessly connect with our customers and allow them to conduct all transactions via a channel of their choice.

❙ What will success look like?

What will success look like?

Improving our digital maturity will deliver significant benefits for students, teachers, parents, carers and school communities, school leaders and school support staff:

- **Students** will benefit from more personalised learning and tailored support. They will be able to track their learning progression and interact with their teachers, parents and carers and peers all through their learning journey

- **Teachers** will have professional development, support and resources to help them apply digital tools within the learning environment, with access to real-time data on student progress and models to improve engagement

- **Parents, carers and school communities** will have greater opportunities to engage and partner with schools through a service channel of their choice

- **School leaders** will be able to choose the digital journey that best suits their schools, with easy access to the tools and services that will enable data-driven decision making, and

- **School support staff** will have new tools and training to help simplify and streamline school management and student administration processes.

Students will

- Receive high quality learning experiences wherever they are

- Have equitable access to subjects and learning materials from within or outside their school

- Have insight into their progress and more involvement in decisions about their education

- Develop the digital literacy skills they need for their future work

- Experience smoother transitions between schools

Parents & carers will

- Have great experiences and be able to interact more easily with schools, with simplified processes for payments, enrolment, learning support and communications

- Have greater visibility of their child's learning journey and ability to participate

- Be able to access the resources to support their child

- Be able to seamlessly engage with Service.NSW to access education services

Teachers will

- Receive the resources needed to develop their digital skills

- Access the professional development required to integrate digital into teaching and learning

- Be able to work within digitally-enabled learning spaces that 'just work'

- Have less manual administrative tasks and more time to devote to students
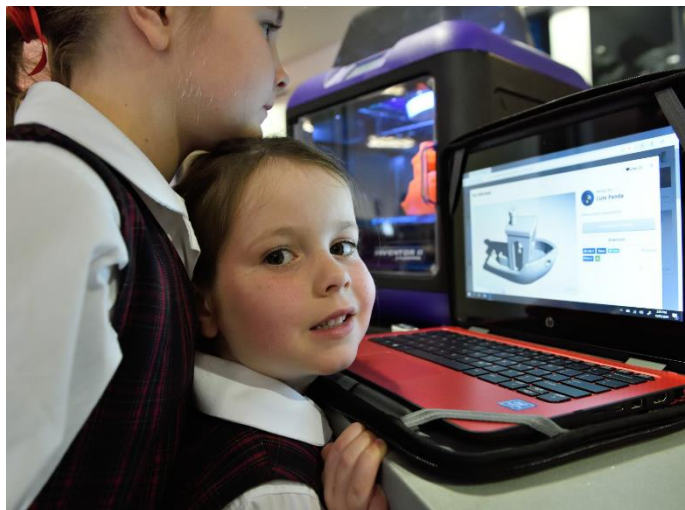
Principals will

- Have core management processes automated to free time to spend on higher value activities

- Be able to choose the digital journey that makes sense to the school and its staff, and be supported in its implementation

- Receive data-driven insights into the effectiveness of new digital pedagogical approaches

- Have more time to spend on coaching and mentoring staff and building team culture and capacity

- Be able to redesign their schools with digital technologies and infrastructure that attracts and retains talent, and helps make each school a great place to work

Support staff will

- Receive the training and support they need to learn and use new digital skills

- Have automated admin tools to spend less time on manual activities and more time supporting teachers and school leaders

- Be better able to support school leadership and teachers with digital adoption to drive higher performance outcomes.

The case for change

To become a leader in digitally-enabled education delivery, we must address a number of challenges.

- We need to improve access to digital resources for our students and teachers, and to digitally-enable our learning spaces to support excellence in teaching

- We must develop the skills of our teachers to confidently leverage digital teaching and learning tools, to build a wider repertoire of teaching approaches

- We need to streamline and automate processes that are taking time away from teachers and other team members, so they can focus on teaching and learning outcomes.

We know some schools are doing amazing things utilising digital in teaching and learning and in school management and student administration.

We need to continue to support these innovation leaders and help others replicate their successes. We will pilot effective digital strategies across different school types and scale those that work best, so they are available across all our schools.

Built together with schools, teachers and students, the Schools Digital Strategy is a plan for achieving an education system that maximises the impact and value of digital innovation.

After extensive consultation with teachers, principals, support staff, students, parents & carers, a set of key challenges were identified.
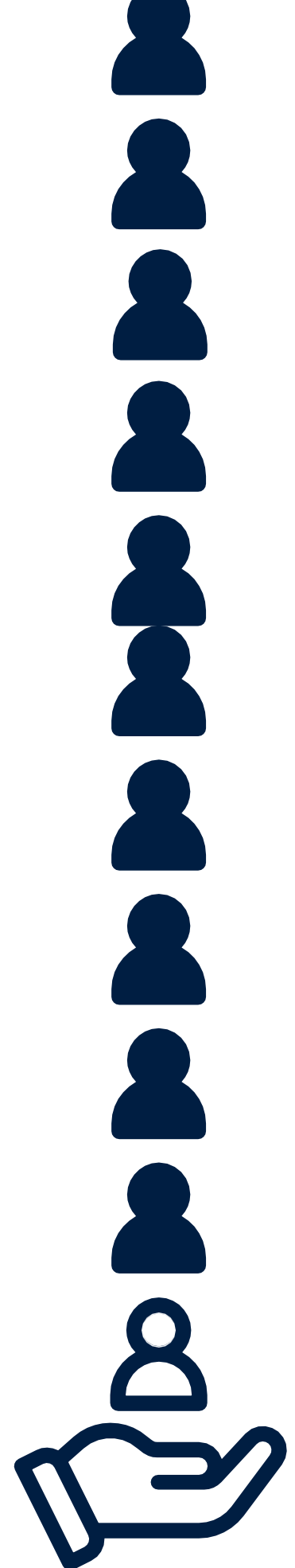
Access to digital resources is unequal

Digital tools, including devices, can facilitate new ways of learning. They enable access to high quality learning resources wherever the student may be and whatever their circumstances.

Digital assessment tools and related technologies can enhance the learning experience, enabling more rapid tailoring of learning content and strategies to address individual student needs in a more immediate and targeted way.

4:1

There is currently an average of four students sharing each device supplied to them by their school, with that ratio worsening sharply the larger a school gets.

There is a significant disparity between schools:

- 93% of small schools have one device per student or better

- Only 1% of larger schools, those with more than 450 students, have an average of one device per student.

Device access for teachers is also uneven, limiting opportunities to integrate digital tools.

Number of students per device

Fig 1. Number of students per device – June 2019 [1]
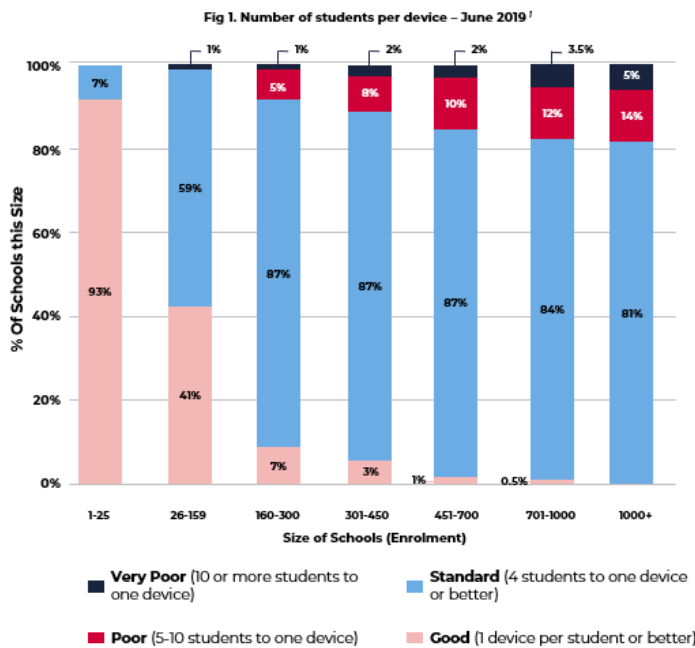
Integration of digital within teaching can improve learning outcomes

Quality teaching is the single most important determinant of a good education. We also know that appropriately integrating digital into that quality teaching can have demonstrably positive impacts on learning outcomes. Schools report that access to high quality, well integrated digital tools and resources gives teachers a wider set of options to engage students and facilitate learning, and a greater capacity to collaborate and share best practice.

Departmental research has found that average NAPLAN scores are higher for those students that have greater access to digital tools and teaching.

The reasons for this are yet to be fully understood and will likely be a combination of factors, including more engaging learning experiences, more variety in learning delivery and the ability to access additional learning resources more readily. The results, however, are clear. Integration of digital teaching and learning methods in the classroom translates into improved results.
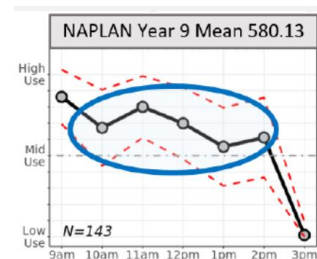
We also know that, on graduation, students will need to independently apply their digital skills to succeed in a variety of new work and life settings.

NAPLAN results and use of ICT within lesson time

Connecting learning spaces with modern Wi-Fi

More than 900 country schools recently had Wi-Fi infrastructure installed across all their learning spaces as part of our Connecting Country Schools program. All 13,000 indoor and outdoor learning spaces in these schools now have high performance wireless connectivity, essential to their capacity to take advantage of digital innovation. Students are now able to access and attend Aurora College or access any digital resource anywhere in the system. These schools are now positioned to build on this infrastructure and better utilise digital in their teaching and learning.

The department is now planning to extend this excellent foundation into all our schools with a Connecting Metro Schools program.

Digital investment must start with the school

We already have robust process and platforms that allow us to effectively manage our network of more than 2,200 schools and all the corporate functions that support them.

However, our digital investment diminishes in reach and effectiveness the closer we get to the classroom. This is where support is now needed the most.

Some schools have selected their own digital solutions to augment their teaching and learning experiences. These solutions, purchased by schools from discretionary funds or those raised by P&C Committees, are often selected without a view of the best options available and can lack adequate maintenance and support services.

This has resulted in complexity and disparity across the schools network, and a fleet of aged digital solutions and devices that impose a substantial support burden on the school and department. This increases the risk of cyber-attack, damage or misuse of technologies or solutions that have been bought.

Additionally, the professional development needed for these environments is unclear, with little data available from these schools and service providers.

In summary, we have widely varied degrees of digital enablement, with some schools showing leadership and excellence whilst others are unclear what to do.

The Strategy will address this by expanding foundations laid with the Connecting Country Schools program into metropolitan schools, standardising digital resources in learning spaces and ensuring that all devices in use are appropriately managed and protected from misuse.
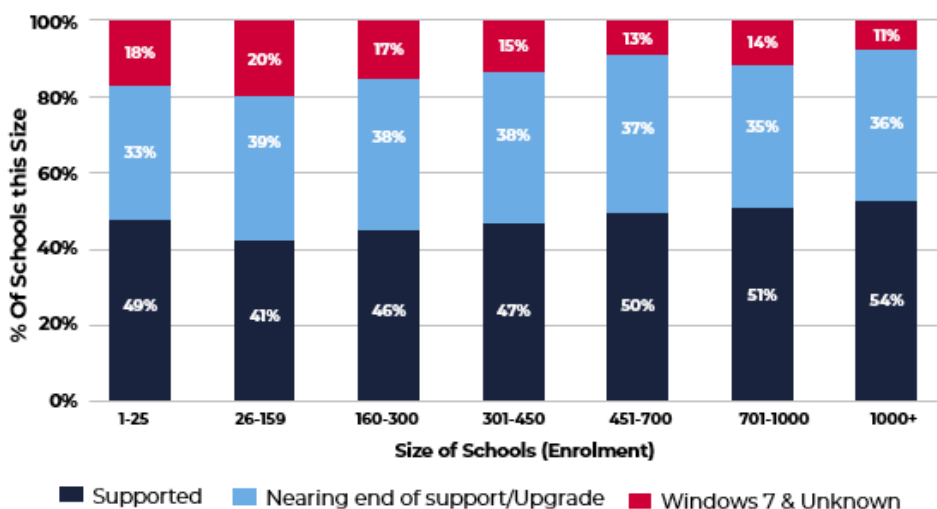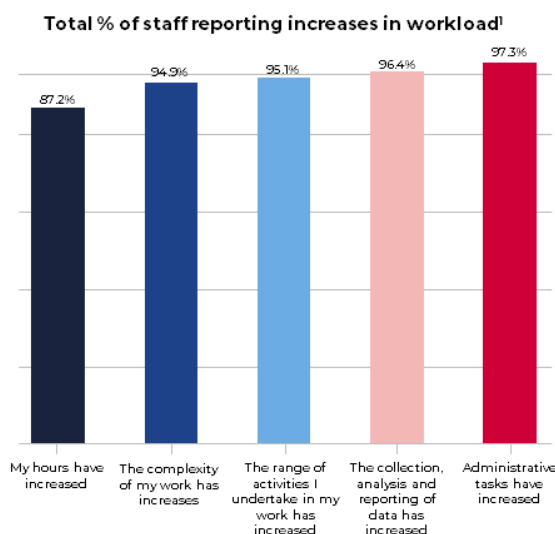
Our school and student administration processes must be optimised

We know teachers and principals alike feel administrative processes are taking time away from them that would be better spent focusing on teaching and learning outcomes. We acknowledge that more can be done to improve the efficiency of many of our school processes and to reduce the time spent undertaking necessary compliance and administrative requirements. We also know some of these processes do not meet contemporary expectations of digitisation, automation and accessibility.

Work is progressing currently to digitise human capital management and payroll processes, but there are other areas where forms and manual processes need to be digitised and integrated.

An investment in digital, skills and support to improve our administrative efficiency will give time back to teachers to focus on their students, give principals more time to build their team and plan for success and allow our administration staff to spend less time dealing with customer transactions and more time supporting their school and the community.

Total % of staff reporting increases in workload[1]

87.2%	94.9%	95.1%	96.4%	97.3%
My hours have increased	The complexity of my work has increases	The range of activities I undertake in my work has increased	The collection, analysis and reporting of data has increased	Administrative tasks have increased

Our customer experience can be improved

Across our school network, the customer experience can vary greatly. Parents & carers often receive communications from the school via email or as paper notes in the bottom of a school bag. Payment and consent processes differ greatly between schools and may involve digital options or the physical signing and returning of papers to the admin block or to the class teacher. The result is inefficiency and frustration as our staff, parents and students navigate these complexities.

Work has begun to change our customer experience from the outside-in with the Parent Portal and Online Enrolment initiatives currently underway. There is, however, a large number of services that still need to be modernised.

We need to focus on our inside-out communication channels and processes to improve accessibility and convenience for our customers when they interact with our schools. Used well, digital solutions will improve satisfaction, efficiency and also reduce our administrative burden.

Supporting our schools with new resources

The Schools Digital Strategy has been developed with schools and for schools. We know our principals, teachers and support staff welcome the opportunity to integrate digital more effectively into NSW schools when they can see its benefit.

But we also recognise that across our more than 2,200 schools, differences in location, demography, size, history and people skills, have resulted in wide disparity in the digital maturity that individual schools possess today.

There is no 'one size fits all' solution to addressing the needs of all schools. Within appropriate guidelines and quality standards, schools are best placed to decide what is right for them and what to focus on at what stage of their digital maturity path.

The Strategy will include tools to help schools identify their current level of digital maturity, the options available to them to raise their capabilities, the benefits in terms of teaching and learning outcomes they can expect and how to access the guidance and support they will need to achieve their targets – starting with professional development and enabled by platforms.

We need to understand more about each school context

A significant challenge we face is our ability to understand how each school has integrated digital into its ways of working.

We know digital capabilities can enhance teaching and learning; they can help us to support our students more effectively, and improve school and student administration.

Through our school research we received insights into the ways schools have adopted digital into their ways of working. Now we need to understand this in more detail, in each school and across the state.

Once we better understand which schools are doing it well, and how, we can help other schools do the same.

Through extension of the Schools Excellence Framework we can provide the means for each school to understand where they are today and set a plan for the future.

The opportunities

We have identified four areas of focus that will be crucial to reform:

1. We must empower our schools to shape their own digital journey

2. We must deliver equity, enhanced digital capabilities and improved customer service

3. We must support our schools and our people in enabling digital capabilities and learning outcomes

4. We must monitor the outcomes and refine our plans

Our Plan
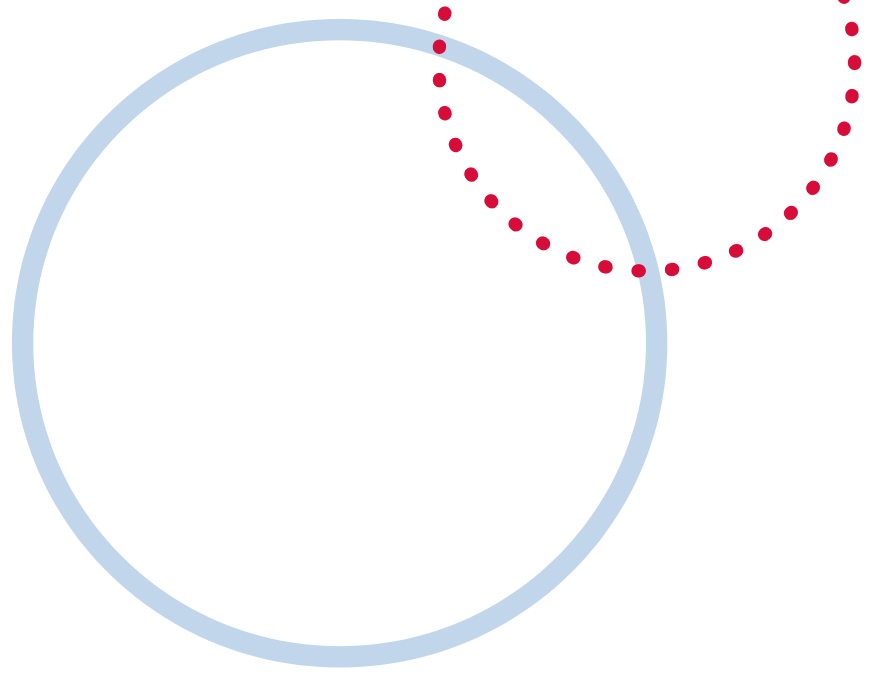
1. **Empower schools to shape their digital journey** by providing resources to help them assess and understand their current digital maturity and plan their development path

2. **Build our schools' digital equity, experience and capability** by strengthening our digital foundations, improving device access ratios and raising the quality and availability of digital resources

3. **Deliver effective digital support** through a service model that provides training, guidance and direct assistance in integrating digital tools and techniques, and

4. **Track our outcomes** by building an evidence base to measure efficacy and progress.

❚1 Empower schools to shape their digital journey

We need to provide schools with the means to understand their maturity and then plan their digital journey

Working with our schools we will develop a digital maturity framework that will help school leaders chart their development path and make the best digital investments.

The framework should be complementary to the Schools Excellence Framework which is already familiar to schools and in use today. It will be reliable, easy to use, provide data aggregation at the school, district and state level, and facilitate comparison of options and potential benefits.

Resources needed to progress a school's digital maturity will be accessible through a service catalogue that will evolve into a marketplace for simple and effective procurement.

Digital resources available on the catalogue will link to the professional development, support and related technology required to integrate and deploy them effectively.

We will build standards for these resources so that schools can be assured that anything they utilise will already conform to approved standards in security, quality and data sharing. Over time we will introduce features like school reviews to assist with a continuous stream of high quality content.

We will:

1.1
Enable digital maturity evaluation and development planning through an easy-to-use framework

1.2
Provide the digital resources through a state-wide service catalogue that outlines options, benefits and support requirements.

1.3
Support school leaders with planning and implementation of digital at their schools.

Immediate focus areas

1.1 Enable digital maturity evaluation

We will design and develop a digital maturity framework to measure where digital is being used effectively in school management, student administration and teaching & learning and within the skill sets of our staff.

Schools have told us they would like this to be complementary to the Schools Excellence Framework (SEF), so that they can use it as part of school planning. This must be focused on much more than technology and will show digital maturity across design, implementation and evaluation.

It will show recommended progression pathways based on experiences of other comparable schools.

This will allow a school to find out who, in a similar situation to them, made which choices and to build communities of practice to collaborate and share their learnings and successes.

As the framework is deployed we will continue to gather data on best practice to refine and expand content and improve outcomes.

1.2 Enable schools access to digital resources

We will build a digital resources catalogue, populated with case studies of exemplar digital practices currently in use across NSW schools and globally.

We will build quality criteria so that the digital resources available demonstrate fitness for purpose, relevance, ability to share data with the school, high standards of privacy and security, accessibility requirements, ease of use and demonstrable benefits for learning experiences and student outcomes.

We will build new professional development material to accompany all resources and provide support to embed new practices within the classroom.

This digital service catalogue will be available to any school, teacher or student wherever they are in the state or beyond.

2 Build our schools digital equity & capability

We must improve equity of access to digital, for our students and schools alike

We will continue our rollout of Wi-Fi to schools, to ensure all schools have appropriate standards of connectivity to support their digital future.

All teachers will have access to digital tools to support them in their work and training to confidently use them. We will agree with our educational leaders an age appropriate digital resource ratio for support of digital pedagogies and move to deliver this equitably across the state.

We will build our maturity across a range of digital capabilities starting with teachers and learning resources, with the longer term aim of supporting a more personalised learning experience based on the individual learning requirements of students.

We will underpin communities of professional practice for our teachers and staff with collaboration tools, to allow them to share ideas and ensure continual improvement.

Our school management and student administration processes will be streamlined and digitised, and we will improve our customer experience by enhancing our digital channels so that parents, carers and our community can connect and communicate with schools more easily.

We will:

2.1
Strengthen our digital equity

2.2
Deliver more support for digital teaching and learning

2.3
Improve our student administration and school management processes

2.4
Drive digital collaboration and communication

2.5
Ensure we are appropriately structured and equipped to effectively manage our cybersecurity, cyber-safety and data privacy risks

Immediate focus areas

2.1 Strengthen our digital equity

We will look to roll-out equivalent connectivity to all schools across the state. We will ensure equitable access to resources and devices for teachers and students.

To help our schools to maximise benefits as they leverage this increased access to resources, we will enhance our digital infrastructure and field support teams to better monitor our assets and safeguard our staff and students.

Our digital resources catalogue will be used to ensure that equity extends into professional development and will refresh our digital literacy programs for teachers and other staff.

2.2 Deliver digital teaching and learning

Through the use of pilots with schools, we will identify and share digital practices with proven success. We will trial these further with differing school types and contexts. Where they demonstrate sustained value we will scale these innovations for wider uptake. Based on these learnings we will develop the resources that schools need and these will be rolled-out incrementally across the network.

We will monitor the outcomes, building a repository of exemplar practices from which other schools can benefit. We will expand the resource hub into a system-wide collaboration platform that encourages sharing of innovative ideas, incubation pilots and digital resources.

2.3 Improve student administration & school management

To give time back to teachers, principals and support staff we will digitise paper-based and manual processes in schools and provide the training and platforms to automate routine tasks. We will provide data-driven insights to school leadership to improve and streamline decision making and school management.

2.4 Drive collaboration and communication

We will build new communities of professional practice to support teachers, staff and school leadership, and optimise the experience for parents, carers and the community in how they communicate with our schools.

2.5 Cybersecurity, cyber-safety and data privacy

We will review our existing cybersecurity, cyber-safety and data privacy governance and risk mitigation measures to make sure have the right organisational design, policies, technologies and culture to keep our students and staff, and their information, safe.

3 Provide digital support to schools and our people

The way we support schools will change to more effectively embed digital and to share successful innovations across our network

Our service model into schools already provides significant support through our Schools Directors, Principal Education Officers (PEOs), Field, IT support, Schools Infrastructure and EdConnect.

To accelerate digital maturity, however, our schools need to have dedicated support to effectively integrate and embed digital into teaching and learning and across school operations.

A new Digital Support Officer (DSO) role will be created to champion digital change throughout the school, with staff, students and school communities. It will allow us to implement and adopt digital practice into schools and for it to be utilised more effectively to support teaching and learning.

Concurrently, we will support schools to continue to innovate and when successful to share those innovations across all schools. We will foster these new ways of working by promoting innovation at scale, providing resources to those that wish to continually trial new ways of working.

We will:

3.1
Enhance our school service model to support adoption of digital practices

3.2
Support and scale continuous innovation

3.3
Expand education and technical support to be local in schools

3.4
Support professional learning to all areas of digital including student and school administration, teaching and learning and device proficiency

Immediate focus areas

3.1 Enhance our school service model to support adoption of digital integration

We will start by piloting the use of a new position, a Digital Support Officer (DSO), who will work alongside education and technology support staff to champion and embed digital innovation.

The DSO will:

- work with school and network leadership to test and document digital maturity and integrate digital within school planning

- They will determine the digital resources required to achieve that plan and will guide staff in their use of digital, embedding these new practices first in learning, support and school operations, and

- They will work with school staff on their professional development plans, ensuring they acquire the skills needed.

This will be accompanied by deployment of a state-wide professional development and enhanced IT support service for schools to provide seamless digital teaching, learning and management experiences.

3.2 Support and scale continuous innovation

We will utilise our Catalyst Labs and our STEMShare programs to encourage and support the embedding of innovation practices in schools. Resources will be made available to schools who want them, to safely experiment in areas of their choosing. As these school-based experiments succeed, they will be further trialled within and beyond schools, eventually becoming available to all through the national digital service catalogue.

4 Track our outcomes

We're serious about success, which is why we will track and measure our progress

In order to track our journey, we will need to change some of the ways in which we capture and measure our data.

We will work with our service providers to gain full access to school data, so that we can analyse the results that digital is delivering.

Across the state we must be able to build our understanding of how digital teaching and learning practices contribute to improved learning outcomes.

We will track and measure how schools are improving their digital maturity, and continue to analyse which digital pedagogies, teaching resources, learning approaches, tools and techniques deliver the best learning outcomes.

We will measure our improvements to school operations and customer experience and continually enhance cyber security.

We will:

4.1
Measure our digital outcomes

4.2
Measure our real-time access to digital tools for feedback and assessment

4.3
Publish dashboards and provide insights of digital resources being used

4.4
Monitor our network for cyber threats, cyber-bullying and non-safe use exposure

Immediate focus areas

4.1 Measure our digital outcomes

We will build a better understanding of how all students are progressing in relation to their learning, so we can build an evidence base for what works best. We will share this information with parents, so we have a joint understanding of their child's progress.

We will monitor the efficiency and effectiveness of digital innovation inside schools to ensure that we are having a positive impact.

At a system level, we will use the data we collect to establish baseline measures, set targets for system improvement, and continually connect our policy to practice and evidence.

We are committed to developing consistent outcomes tools and measures that are appropriate for all students, to gauge the most effective approaches to digital education.

Our immediate priorities are to:

- Work with our service providers to gain full access to school data, so we can integrate student data to support personalised learning

- Develop an approach to track and report the learning progress of our students across all of our platforms, providing this information to teachers, support staff and parents

- Measure individual, school and network learning progression and provide digital support where it is needed the most, and

- Extend the STEMShare efficacy testing into other programs to measure and improve customer satisfaction.

Our Outcomes Framework

Teaching & learning

Improved academic performance and more active student engagement in learning.

Equity

Students have equitable access to high quality digital learning resources, across all schools.

Teachers have equitable access to professional development and to the resources required to ensure quality teaching and learning experiences.

Customer experience

Transactions and communications with our schools are intuitive, personalised, less complex and less time consuming.

Efficiency

The overhead of administration and compliance tasks is significantly reduced, delivery of school services to support teachers, students and school communities is streamlined and monitoring of student outcomes and wellbeing is improved.

Effectiveness

School managers, teachers and staff can focus primarily on high-value activities and education delivery and can apply their new skills effectively within their roles.

Efficacy

Improvements in teacher and student self-efficacy is supported through better training and sharing of digital resources.
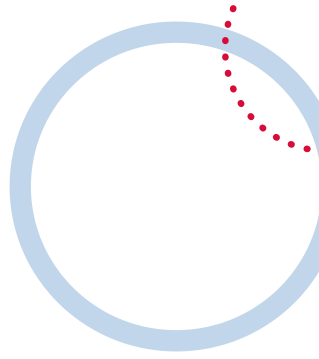
Our digital future

The department would like to acknowledge everyone who contributed to the formulation of this strategy.

It is the product of much collaboration, debate and revision, and could not have been produced without the enthusiastic contributions of many people.

Digital is ever changing. Digital strategies today offer guides for the future and we expect the journey will change along the way.

It is recommended that the Schools Digital Strategy be a living document, periodically refreshed as new approaches, learnings, developments and changes to policy occur within the department and globally.