

# schoolnews

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## Special Reports

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Artificial intelligence: The next education revolution

## Adam Voigt

Attention Seeking Missiles

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## Editor's Note

### A futuristic look at education

**When you hear the words 'artificial intelligence' it might conjure images of futuristic robots that develop a mind of their own and take over the world.**

The reality of AI is much more every day. Examples of artificial intelligence include Google's intuitive search results or Facebook's suggested Friends.

The programming behind these online systems provides users with prompts or answers to suit their needs based on, for example, previous searches or current friends.

Those in the know believe artificial intelligence's capacity to "learn" and respond to each user could also be extremely beneficial in education and you can read all about it in our *Special Report*.

Artificial intelligence software on computers, phones, laptops or tablets is already being used in forward-thinking schools around the world to allow students to navigate at their own pace through learning modules set by the teacher.

The AI program adjusts its content and questioning for each student based on their previous right and wrong responses and learns about

each student, such as strengths and weaknesses and learning styles to tailor learning content for them.

This could be the solution to the current debate over how to provide individualised learning to students as recommended in Gonski's second report.

Staying with the theme of technology, this edition of *School News* also takes a look at video gaming and its place in schools – should schools cater to the popularity of esports – as well as the use of robotics, drones and laser machines as part of the school curriculum.

We also cover off on everything from school fitness equipment to air conditioning, seating, outdoor furniture and facilities management and offer advice and pointers to educators on these practicalities.

**Kat Donaghey**, editor  
*School News*  
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# schoolnews

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## New South Wales

### Sharing school facilities

**NSW's successful *Share our Space Program* has become permanent, with 166 government schools opening their facilities to the community during the school holidays.**

"We know local communities have loved having access to school facilities after hours and that is why this successful program is here to stay," said NSW Premier Gladys Berejiklian. "Schools across our State offer such valuable open and green spaces and it is great that instead of being locked away from the community over the holiday period, they will open for the community to enjoy." Participating schools receive a \$5000 grant to help upgrade their facilities for community and school use.

### Preschool subsidies an Australian first

All three-year-olds will be subsidised to attend community preschool in NSW, saving families an average \$825 a year.

NSW is the first state in Australia to provide the financial assistance, with Premier Gladys Berejiklian saying it would result in better education and increase the likelihood of students attending university.

### Keeping kids cool

Hot temperatures send the brain into survival mode and make it harder to think.

About 1000 NSW public schools will receive air conditioning thanks to a \$500 million funding boost.

"This funding will ensure thousands of classrooms that previously did not have air conditioning will now receive it," said NSW premier Gladys Berejiklian.

New schools and school upgrades will also have air conditioning installed in classrooms and libraries while unflued gas heaters will be removed.

The Cooler Classrooms program will consider factors that influence classroom atmospheres such as humidity, the local microclimate, design of the classrooms and schools, as well the impact of hot days on students with specific needs.

It will target schools with the greatest need in metropolitan, regional and remote areas.

### New schools

THE NSW government says its building program for 170 new and upgraded schools is the "largest investment into schools by any state government in history".

The Berejiklian state government says it is investing \$6 billion over the next four years in a building program unlike anything NSW has experienced before.

Work will commence on 40 new and upgraded school projects this year, and planning will also begin on a further 20 new and upgraded schools.

Currently more than 110 school infrastructure projects are already underway, delivering more than 43,500 new student places and more than 2000 new permanent classrooms.

Mr Stokes said all new and upgraded schools are being designed with sustainability in mind and to accommodate best practice in teaching and learning.

## Queensland

### Girls' uniform update

**Qld state schools will be required to offer more uniform choices for girls - including shorts and pants - from 2019.**

The *Student Dress Code* was updated following a review and consultation with stakeholders.

"We know around 60 percent of state schools are already offering these uniform options for girls, but we found that some schools had not updated their student dress codes in

many years," said Education minister Grace Grace.

"All Queensland girls should be able to engage in active play and classroom activities or ride their bikes to and from school without being restricted by what they're wearing."

"I'm happy to leave it to schools to decide what design, colour or style of uniforms should be introduced in consultation with their communities, including P&Cs," she said.

"I'm sure all schools will come up with new uniform options that best meet the needs of their students."

### Closing Indigenous gap

Qld claims its Aboriginal and Torres Strait Islander school retention rate continues to rise.

Education minister Grace Grace said the Year 10 to 12 apparent retention rate has been rising since 2012 at a faster rate than non-Indigenous students.

"In 2017, the Year 10-12 apparent retention rate gap fell to 16.1 percentage points, down from a high of 21.4 percent in 2012.

"This shows that we are making gains towards closing the gap for our Aboriginal and Torres Strait Islander students.

"In addition, last year 97.2 percent of Indigenous state school students across Queensland achieved Year 12 certification, compared to 98.1 percent of non-Indigenous students.

"Also, nearly two thirds (63.8 percent) of OP eligible Indigenous state school students across Queensland achieved an OP 1-15 in 2017, up one percentage point from 2016."

Minister Grace said Queensland was home to close to one-third of Australia's Indigenous student population, with 29.9 percent of the total number of full-time Aboriginal and Torres Strait Islander school students enrolled in Queensland schools in 2017.

### Study Qld campaign

Qld wants to increase its share

of the international education market with a new 'Start here. Go anywhere' campaign.

"International education is worth more than \$4 billion to our economy every year - making this industry our second largest services export after tourism," said Education minister Kate Jones.

"International education currently supports around 20,000 jobs across the state. With this new campaign, we hope to grow this industry to support 25,000 jobs by 2026.

"We've seen record numbers of student enrolments from China and India in recent years. That's why these markets are an important part of our new communications strategy," she said.

"This campaign sells the great opportunities afforded international students in Queensland - no matter what they hope to achieve in their careers, Queensland is the place to make it happen."

## Victoria

### Schools partner with artists

**Schools across Victoria will develop partnerships with local artists, writers, actors, musicians and museums.**

Seventeen schools received funding in the inaugural round of the *Creative Learning Partnerships* program. Examples include Rainbow P-12 College, which has partnered with sculptor Alex Sanson to help students learn about force, motion and energy, and use the findings to create a sculpture. Students at Collingwood College will collaborate with artist and digital games designer Harry Lee on a multimedia project to boost students' writing and performance skills. The *Creative Learning Partnerships* program supports projects that use creativity as a catalyst for student learning. For more information about the program and the projects undertaken by grant recipients, visit [creative.vic.gov.au](http://creative.vic.gov.au) ►



## School Paging Systems

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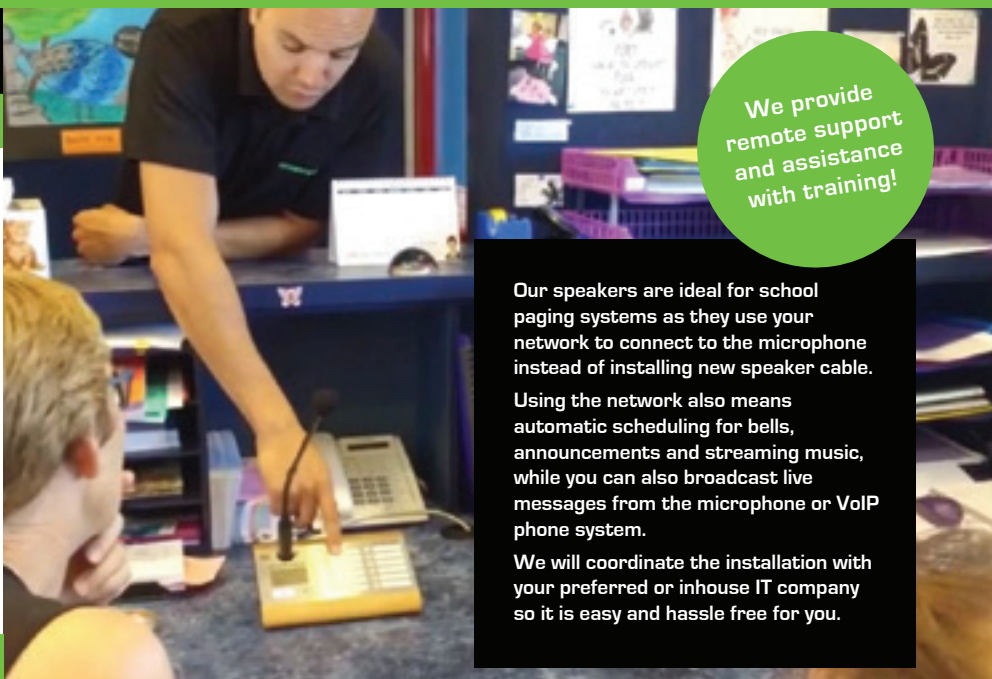


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Vantec series speakers have a nice feature that is sure to prove handy: a built-in Bluetooth wireless system allowing you to play music into the speaker and/or link speaker to speaker to save cabling.



## ◀ Getting more kids active

Three hundred Victorian schools will share in the \$1.1 million *Active Kids* initiative to help cover the costs of sports equipment, uniforms, transport, entry fees, coaching, venue hire and coverage of relief teachers. The *Active Kids* initiative aims to help increase the proportion of students taking part in physical activity five times a week. "We know that the cost of interschool sports can be a barrier to participation, which is why we're helping students that need it the most cover those cost," said Education minister James Merlino.

## Hungry to learn

Victoria's \$13.7 million School Breakfast Clubs have served five million meals to students,

ensuring they start the school day on a full stomach. School Breakfast Clubs have been providing 50,000 free meals each week at 500 of Victoria's most disadvantaged schools since 2016.

Since the program started, the state government claims nine out of ten teachers have seen improved student concentration in the classroom, while seven out of ten teachers have noted improved attendance and more than eight out of ten teachers said they now had better relationships with their students.

The research also found in 2017, 87 percent of schools felt they were meeting the breakfast needs of their students, a dramatic increase from the 43 percent who felt they were meeting breakfast needs prior to the program.

## South Australia

### Masters' scholarships

**Public education teachers are encouraged to apply for a Masters' degree funded by the state government.**

The *Masters for Teachers Scholarship* program aims to build on and improve education practices and outcomes across the state. Applicants must be permanent South Australian school or preschool teachers currently in the public education system and must have been employed by the department for a minimum three years. Applications close 7 September 2018 and can be accessed through the Department for Education intranet.

## Head of education departs

After nearly 12 years leading the Department of Education Sharyn O'Neill will be Western Australia's next public sector commissioner. Ms O'Neill was the longest-serving head of education in Australia overseeing more than 800 public schools, 45,000 staff, 300,000 students and a recurrent budget of \$5 billion.

## Tasmania

### Student wellbeing strategy

**The Tasmania government will spend \$17.8 billion over four years in its first Wellbeing Strategy for students.**

Improving mental health will be the first focus, with an action plan to be released at the start of 2019 addressing key issues such as resilience, depression, anxiety and cyber safety. Action plans will also be released in 2020 and 2021 addressing physical health and the environment, and focusing on wellbeing in the eyes of the young person.

## Western Australia

### Suspension data

**Less than five percent of students were suspended from public schools in 2017.**

Reasons for suspensions include damage to or theft of property, violation of a school's code of conduct or school/classroom rules as well as physical aggression, and abuse of staff and other students.

"The vast majority of students come to school each day to learn and contribute in class," said schools deputy director general Stephen Baxter.

"For students who disrupt the learning of others by misbehaving in class or are aggressive or bullying, suspension sends a clear message about what behaviour is appropriate."

"For students with ongoing unacceptable behaviour, exclusion is the last resort and eight students were excluded in 2017, the same as in 2016."

## Northern Territory

### Fruit as art

**Students at Gapuwiyak School have been learning the benefits of healthy eating by creating art with fruits and vegetables.**

Principal Clarice O'Leary said the activity acknowledged the work of the canteen in supplying wholesome foods, and the importance of a nourishing diet in maintaining physical and mental vigour. "The community store supplies the canteen with fresh food, which includes potatoes, pumpkins, carrots, broccoli, cauliflower, cabbage, onions and tomatoes," she said.

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# The future of education has landed

**The EduTECH conference was an exploration of ideas and technologies in education.**

Working in classrooms and offices can sometimes be an isolating experience.

But those who broke out to attend the EduTECH conference in Sydney – the largest education event in the Asia Pacific and Southern Hemisphere – had an enriching learning experience.

A record crowd of more than 11,000 people – including school students – attended this year's three-day event at the International Convention Centre at Darling Harbour, making it the biggest EduTECH to date.

For attendees is was a chance to bask in the ideas espoused by 298 speakers who discussed

topics ranging from Neuroscience and understanding the 'ancient brain' in a high-tech world to the importance of teacher librarians.

Forward-thinking tech organisations such as Google and Microsoft had a strong presence, presenting a range of speakers and hosting workshops to showcase their education-based products.

Leading academics from around the world, government decision-makers, innovative education thinkers and business leaders rounded out a full schedule.

A popular speaker was Google's Jonathan Rochelle (JR), director of product management, who presented a plenary discussion on 'machine learning and artificial intelligence', exciting the hundreds of listeners in the vast auditorium with his predictions that advances

in tech products would help facilitate the progression towards individualised learning (see article page 14).

In between conference sessions, workshops and masterclasses, visitors wandered through a maze of more than 270 exhibits, where stalls showcased everything from virtual reality headsets to classroom seating options and even the humble pen.

*School News* magazine hosted a stall in the expo and distributed free copies of the previous edition to interested educators and suppliers.

Our popular holiday competition was won by Audrey Mason from Le Perouse Public School in New South Wales who will enjoy three nights' accommodation in a two-bedroom apartment at Argosy On the Beach in Clifton Beach, Cairns. ►



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ClassVR was a popular exhibit at EduTECH.

◀ **EduTECH organisers said the most popular sessions this year included:**

- Federal education minister Simon Birmingham's closing address on day one
- Former Prime Minister Julia Gillard AC's opening of the *K12 Ed Leaders Congress* on day two
- NSW education minister Rob Stokes on *'Technology makes a wonderful servant but a terrible master'*
- Prakash Nair's discussion that "children don't need to be taught to learn, they are born with skill. It's our job

as educators to create an environment in which they thrive"

- Dr Terry Byers, director of the Churchie Centenary Library and Research Fellow at the University of Melbourne on the topic of libraries as the academic heart of a school.

An EduTECH spokesperson said the annual event was unique chance to bring together the whole education sector together under one roof.

"This event covers topics for schools, universities, TAFEs and RTOs and adult learning and it is the best time to network with other

passionate educators from across the globe.

"EduTECH also features the largest ICT expo in Australia, where IT, ICT leaders and educators are all able to experience the latest technology, ranging from AR/VR, AI, 3D printing, solar energy and many more."

Attendance at the annual conference counts towards professional development for educators, a testament to the range of learning on offer at the various sessions.

However the exhibition room with its rows and rows of stalls also offers those in the

education sector – from teachers to managers, bureaucrats and academics – a chance to test out new products and tech advances that may benefit the classroom and speak directly to the brains behind them.

A popular stand this year was ClassVR which supplies virtual reality headsets to schools and made its first appearance at EduTECH.

ClassVR CEO Nik Tuson said the expo was a chance for teachers to explore emerging and future technology and get an understanding of how the technology can improve students' learning. ►

## The Drain Man saves schools money and disruption with modern plumbing techniques

**Blocked toilets and drains and large trees choking drains are common maintenance issues at schools that can go very wrong without the right expertise**

The Drain Man, founded more than 17 years ago, specialises in drain cleaning and relining and boasts a "zero failure rate" policy.

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The Drain Man founder Brendan Dover says the company is an industry pioneer in its methods of dealing with drain clearing & relining.

They recently attended the EduTECH Conference in Sydney and explained their innovative methods which save money and create less disruption.

### CCTV

The Drain Man uses CCTV inspection as part of its cleaning and relining process, using a drain camera system, robotic cameras or tractor cameras to survey and identify the problem.

"A combination of powerful hydro jetting clearing equipment and drain clearing techniques are used to clear the blockages, including tree root ingress," says Brendan.

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# Do video games have a place in schools?

## Gaming is soaring in popularity but experts are divided over whether students should be encouraged to play.

The popularity of gaming is impossible to ignore when you consider the statistics. Billions of people around the world play video games. In Australia, 97 percent of households with children have computer games and 67 percent of Australians play computer games, according to the Digital Australia Report 2018 by Bond University and the Interactive Games and Entertainment Association.

The survey also found 31 percent have competed at some stage in e-sport competitions and 33 percent have watched an e-sport tournament.

Grand final tournaments of games such as League of Legends – the world's largest e-sport – can attract as many as 80 million viewers to its finals tournaments – rivalling some mainstream sports.

Increasingly parents find themselves at loggerheads with children who spend more and more hours playing online team sports with friends. The intense popularity of the sport has led medical experts – including the World Health Organisation – to issue warnings on the potentially addictive nature of online gaming. WHO in fact has classified gaming disorder as a mental health condition, raising fears in parents about the amount of time children spend on screens.



Analysts who have crunched the numbers of gaming agree that its popularity has not yet reached a peak. In a recent Forbes article, it was estimated that e-sport revenues will exceed \$1 billion next year and the industry is considered untapped in terms of its potential.

Realising the popularity of the sport – particularly among young males – schools have begun introducing e-sport competitions and forming gaming clubs.

However experts such as Dr Kate Raynes-Goldie, a game designer and founder of Future Human Academy, do not agree with schools providing gaming as an extracurricular activity.

*Schools News* magazine spoke

to Dr Raynes-Goldie and League of Legends representative Ivan Davies for their differing opinions.

### League of Legends

As a community and social play manager with one of the most popular esports in the world, Ivan Davies says gaming is “commonly part of a young person's life today and we should all look to find how we can best support this journey”.

Ivan says Riot Games, the company behind League of Legends (LoL), is keen to foster sportsmanship as a core element of online play.

“We want to support the next generation in becoming empowered, knowledgeable, and respectful digital citizens through online play.”

“Many thousands of students are playing League of Legends every day in Australia, we're keen to meet them on their chosen digital journey and find ways, with the support of schools and parents, to provide guidance and support.”

The company has developed a high school League of Legends initiative helping facilitate schools that want to establish gaming clubs and e-sport competitions.

Ivan says around 20 schools in Australia have started a weekly club and over 100 schools from Australia will compete in inter-school League of Legends esports this year.

Most school clubs were started by a teacher responding to student requests. “League of Legends clubs are a space for productive and positive play, utilising the parallels between competitive gaming and traditional sports to teach important skills and values. The program focuses on sportsmanship and teaching students how to handle online interaction in positive and healthy ways”, he says of the League of Legends high school initiative.

“A League of Legends club is an authentic way to engage students and provide teachers with the environment and tools to teach digital citizenship.

“We have been working closely with teachers and researchers



◀ “A lot of teachers haven't experienced virtual reality yet so we have had a huge response,” said Nik.

“Teachers are the ones at the coalface with students and they can see virtual reality as a way to get kids engaged.”

The company has sold VR headsets to more than 180 schools in Australia since launching locally late last year (and to more than 3000 schools globally).

Mr Tuson said research revealed students retained 90 percent

of information when they experienced something compared to retaining only 10 percent when reading about a subject.

“We can increase student information retention to 90 percent with this technology,” he said.

“Students are immersed in the experience within the safety of the classroom. They can experience landing on the moon, or walking along the Great Wall of China.

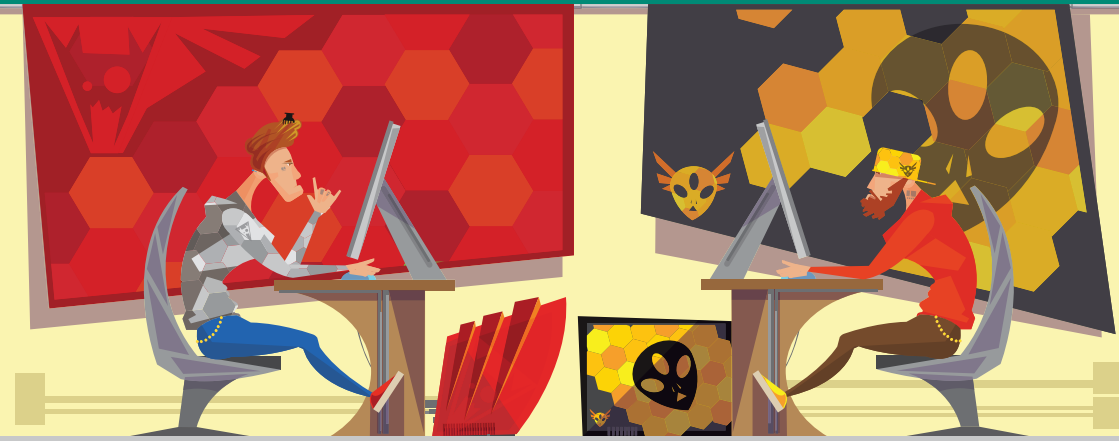
“They can go inside a blood cell or experience a war where they see the smoke and hear the guns.

“When they have an emotional connection, they will remember it”

Promethean international events manager Gaynor Harper said the EduTECH expo was an important way to connect product manufacturers to teachers who were using the products in the classroom.

Promethean produces large ActivPanels which can be likened to the blackboards of the future – with responsive touch screens, internet connection and interactive displays.





to understand the goals for 21st century learners and digital citizenship.

"Together we have developed a teaching guide for teaching sportsmanship and online citizenship which aligns with the Australian National Schools Curriculum, designed a range of teaching resources and student learning activities, have run workshops on sportsmanship and supported teachers with a League of Legends learning day at the Powerhouse Museum in Sydney."

Like traditional sports such as soccer and rugby league or extracurricular activities like ballet and music, Ivan says it's important for parents to support their children's passions and be aware of the challenges they might face pursuing this pastime.

"Every child should feel that they're able to discover and express who they are," says Ivan.

"Not everyone is into sports like soccer and for many students esports is their chance to represent their school in something they are good at.

"But like traditional sports, students can be taught about



**About 20 schools in Australia have started a weekly gaming club and more than 100 schools will compete in inter-school League of Legends esports this year.**

sportsmanship and positive team based interaction by playing League of Legends.

Dr Kimberley Voll, a senior technical designer at Riot Games, encourages parents to understand their children's gaming interests.

"Video games teach and challenge us, providing ways to socialise and connect with friends both locally and around the world," says Dr Voll.

"For painfully shy kids, online games can provide a more accessible way to develop social skills, rather than remaining isolated, helping them form long-lasting friendships.

"I encourage parents to spend time understanding what their

kids are playing and why these games matter to them. Parents are amazing allies in gaming as a healthy part of a balanced lifestyle."

### Gaming without computer screens

As a game designer who has been playing computer games since she was young, Dr Kate Raynes-Goldie is not opposed to the online world.

However, the popularity of gaming is such that the founder of Future Human Schools says she does not believe schools should also be promoting it.

"I don't agree with e-sport as an extra-curricular activity in schools because kids are already

spending time playing games," says Dr Raynes-Goldie.

"I started gaming when I was older than a lot of the kids playing now and I developed all kinds of problems like RSI and I had to get glasses from staring at screens.

"Parents are worried about their kids being addicted to gaming but there are these other health issues they also need to consider."

Dr Raynes-Goldie now holds workshops encouraging children to create their own games in the "physical world" which do not involve screen time; to get student moving and socially interacting.

She says it is possible to promote game playing that is not "screen focussed" and that feeds children's innate love of invention and game designing.

One of the greatest challenges for parents and schools, she warns, is equipping young people to resist the addictive nature of computer games that are intentionally designed to keep young people hooked, therefore increasing revenue. ■

**By Kat Donaghey, Editor**

"This is an important meeting point for sellers and the end users and we have teachers who use the products who come along and talk to other teachers about their experiences," said Gaynor.

"We like to help teachers get the most out of the technology."

However the expo wasn't all about future tech, with a Bic stall drawing a steady crowd of educators who doodled with a range of pens, markers, coloured pencils and crayons.

Bic trade marketing manager

Brendan Carty said the "humble pen" still played an important role in classrooms and would continue to do so in the future.

"Being able to write down a note with your hand stimulates different parts of the brain," said Brendan.

"Using pens provides a balance between traditional versus technology and how they can co-exist.

"We don't see handwriting becoming extinct – it is still a mandatory skill that is needed." ■

**By Kat Donaghey, Editor**



Federal Education minister Simon Birmingham at EduTECH

# Artificial intelligence: The next education revolution

**In the near future, students will learn at their own pace on computer programs that adapt to suit the abilities of each child.**

When Facebook suggests a Friend or Facebook page you might be interested in, that is an example of artificial intelligence.

When Google personalises your search inquiry to provide intuitive results, that too is an example of artificial intelligence.

Artificial intelligence, or machine learning, is so much a part of daily life that most of us take for granted that our devices can prompt and offer suggestions based on our previous queries, posts and Likes. In many industries and spheres – from medicine to the military – artificial intelligence is making even more dramatic appearances.

Self-driving cars, medical scans that can identify skin cancers and mail delivery drones are just some of the applications of AI or machine learning that are drawing international headlines.

But one important sector that could well benefit from AI but is lagging behind is education.

Artificial intelligence in education might conjure images of futuristic classrooms in which the teacher has been replaced by an all-knowing robot. But the reality is more akin to the adaptive software driving those Facebook and Google prompts.

Experts believe that the future of education will be harnessing those aspects of AI to personalise lessons for individuals. And this radical shift towards a computer-driven future is being touted as the next great revolution in education.

## Personalised learning with AI

David Gonski has already planted the seed in Australia for scrapping the current “mass education”



**Google product management director Jonathan Rochelle sees a future for AI in education.**

system is favour of one that offers “personalised learning” to each and every student.

The concept is favoured by teachers and has been supported in theory by the Australian Prime Minister Malcolm Turnbull.

Exactly how teachers could in the future be expected to teach to the strengths and weaknesses of every student in the class remains the subject of debate.

But artificial intelligence is emerging as one of the key tools by which schools may be able to offer every child a personalised education.

Education companies are already working on a range of adaptive learning programs designed to adjust to suit the abilities of students.

The software would be used on computers, phones, laptops or tablets and provide content and testing that goes beyond basic question-and-answer or multiple choice questioning.

As students navigate through learning modules set by the teacher, the program would adjust its content and questioning for each student based on their previous right and wrong responses.

The AI program would learn about each student, such as strengths and weaknesses and learning styles and use that information to tailor learning content for them.

The system could provide very specific feedback so that both the student and teacher knows where



the child needs improvement.

Students could also learn at their own pace – so-called self-directed learning – progressing more rapidly or taking their time depending on their level of comprehension or ability.

Google product management director Jonathan Rochelle, or JR, says machine learning programs could make “personalised, self-directed learning achievable in the classroom”.

Jonathan was a keynote speaker at the EduTECH conference in Sydney in June where he spoke on the questions “What is artificial intelligence? What is machine learning? Why are they so important and topical right now?”

Jonathan described artificial intelligence as the “fourth industrial revolution” that could change the way students learned and teachers taught.

Mark Scott, the former head of the ABC who runs the NSW Department of Education, also describes the use of artificial intelligence in schools as nothing short of a “revolution”.

Mark Scott was another popular EduTECH speaker who addressed the subject of technology challenges in education.

He said one of the great challenges would be bringing technology innovations into every classroom, to every teacher in every school.

Mr Scott said tools such as AI would provide “important information about each child and about the best interventions for each child”.

“I get quite excited when I think about the tools that may be available to teachers in the future,” he told conference attendees.

In a radio interview with the ABC’s *Science Program*, he also said it was time to “change the way we teach, change the tools we use and change the operating environment of classrooms”.

“Technology is a vital exciting tool that great teachers are going to be able to use to revolutionise education in our schools in the years ahead,” he told the ABC.

## Teacher Support

Artificial intelligence has direct benefits to teachers, not least the ability to pinpoint quite specifically the learning styles and abilities of every student.

Experts also suggest that having AI programs marking tests, essays and assessments on such subjects as maths, science, blah and blah will lighten administrative duties, freeing more time to focus on lesson planning and one-on-one interactions.

AI can provide advanced study programs or one-on-one specialist tutoring which teachers may not have the time to offer their brightest students.



With software programs providing the nuts and bolts of formal education, teachers could also spend more time on enrichments and social interactive skills.

Google's Jonathan Rochelle says the current system of education is overburdening teachers with too much standardised testing and bureaucracy on top of an ever-expanding curricula.

Instead of asking teachers to do more, he says, we should be asking them to do better and one way is by incorporating technology and innovations in the teaching.

One academic goes so far as to predict a future in which teachers have been replaced by so-called robots.

Sir Anthony Seldon, vice chancellor of the University of Buckingham, told the *British Science Festival* last year that teachers will eventually lose their traditional role and become classroom "assistants" tasked with such duties as setting up equipment and maintaining discipline.

Instilling knowledge in students would be the role of artificial intelligence.

"Everyone can have the very best teacher and it's completely personalised; the software you're working with will be with you throughout your education journey. It can move at the speed of the learner.

"This is beyond anything that we've seen in the industrial revolution or since with any other new technology.

"These are adaptive machines that adapt to individuals.

"They will listen to the voices of the learners, read their faces and study them in the way gifted teachers study their students.

While Mark Scott says AI will never replace teachers, others

have noted the benefits of having programs that don't take sick days, do not require expensive ongoing maintenance and never get tired.

### Cons of AI

As head of one of the biggest education systems in the world, Mark Scott, director of NSW Education Department, says the greatest challenge to a technological future is scale.

With hundreds of schools in NSW alone, thousands of teachers to train and upskill, and thousands of students to equip with learning tools, the difficulty is not only bringing innovation into every classroom but ensuring technology is being used to its potential.

Mr Scott asks the question: "What percentage of teachers are currently confident with technology?"

"Are we using technology to change and improve the way we teach and improve outcomes?"

It's one thing to supply teachers with adaptive learning software but so teachers have the training and skills to make the most of the futuristic technology?

Do schools have the bandwidth to make the programs worthwhile?

Other questions that have been raised in public discussions on AI revolve around the collection of data and how to manage ethics and privacy.

If a student's much more personalised learning data is being collected over the entire duration of his or her education, what privacy protections and limitations are in place?

What happens to the data? And who makes the decisions about the role of AI in each school or education jurisdiction? ■

By Kat Donaghey, Editor

Supplier Profile | The THRASS Institute

## A paradigm shift in literacy teaching

The THRASS Institute (Australasia & Canada) is an Australian based company that has developed a Specific Pedagogical Practise (SPP) for the teaching of literacy, marketed as THRASS - an acronym for 'Teaching Handwriting, Reading And Spelling Skills'.



THRASS is a phonetics teaching-tool that has made a paradigm shift in the teaching of phonetics. It has a phonographic, multisensory focus, complemented by an analogous learning model that makes reading and spelling acquisition much simpler, faster and more sustainable than conventional 'phonetic' approaches. As

a classroom strategy THRASS is fun, systematic, explicit and linguistically correct.

The THRASS SPP and accompanying THRASS charts and teaching resources have been highly effective in schools and learning institutions since 1998 and are the most widely used and recognised teacher reference tools for teaching the phonographics and orthography of English. ●

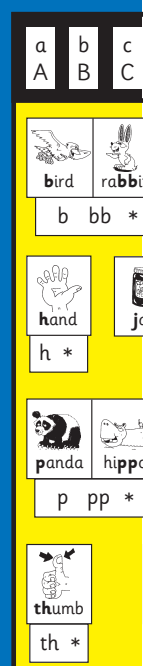
For more information please contact the THRASS Institute by visiting [www.thrass.com.au](http://www.thrass.com.au)



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# Young principal Joshua Duff is proud of the school he leads in a small mining town

**At just 29 years of age, principal Joshua Duff is gaining recognition as a rising star. He tells us about his high school in regional Queensland.**

In a small town, educational facilities such as a high school mean much more to the community than just education. At Moura High, we are a HUB for learning and community engagement, and a source of positivity, growth and expertise. That is why strong community and parent relationships are essential to our work at Moura State High School.

Situated in the small Central Queensland mining and agricultural town of Moura, we are a small high school of 170 students. Our school vision is one of collaboration with the community in which we are much 'more than just a school'. With an ICSEA of 930, an Indigenous population of 12% and 11% of students verified with a disability, the essential pillars of our day-to-day work are community collaboration, providing opportunities for students despite our size and location and high expectations of students. It is upon these pillars that our school has fostered its success.



Joshua Duff



**Our school vision states that 'we are more than just a school'. This vision encapsulates our role in the community as a HUB for learning.**

## Community Engagement

Our school vision states that 'we are more than just a school'. This vision encapsulates our role in the community as a HUB for learning. Our strong community engagement has been built

upon the foundation developed by recent Principals Garry Goltz and Ian Miller and is now accelerating to another level. There are numerous examples of our school's collaboration with the community and neighbouring schools.

Our 2018 STEM Day for Year 6 and 7 students was immensely successful, largely due to the great collaboration between our school and Moura Primary School, as well as many other local businesses and organisations. Moura SHS teacher Sarah Conway led the project in collaboration with Moura SS teacher Elly Fiedler and engaged local mining company Anglo-American, Banana Shire Council and Woolworths Biloela. Further afield, assistance was received from Central Queensland University (CQU), Griffith University, the University of the Sunshine Coast and the Online College of Advanced STEM. This collaboration provided an incredible opportunity for students to engage in solving a real-world STEM problem.

Moura SHS has been involved in Australian Business Week (ABW) for over 20 years, a program which engages our Year 11 students in entrepreneurial skills facilitated by teachers and the community. In 2018, teachers Kelli Crane and Grace Kevill-Davies led ABW with the assistance of CQU and local businesses. Over the history of the program, incredible numbers of community members have played a part in facilitating student skill development as mentors, coaches and judges. Engaging local business people with great entrepreneurial skills has elevated our students capacity to apply higher order thinking to practical industry situations.

Over the past 4 years, our school's and community's capacity for providing pathways for students, particularly in the way of apprenticeships and traineeships, has grown significantly. Our Industry Liaison Officer Trish Mosk works incredibly hard to engage with large organisations such as Anglo-American, Queensland Nitrates and CQU, as well as small businesses such as local mechanics, grocers, hair and



Jared Clark and Noah Saxby, Year 8, preparing to climb the school rock climbing wall.





Year 11 students being judged by community members on their Australian Business Week entrepreneurial skills.



Year 6 Student Laura Collins and Year 7 Student Chloe McGeachin experimenting with volcanoes during Moura State High School annual STEM Day.

beauty businesses, medical practices and agricultural organisations to ensure every student has a pathway which suits their skill set. Our school is very proud of these strong links with the community.

### Student Opportunities

Despite our size and location, we provide incredible opportunities for our students both within and beyond our school. Our small size, however, also allows us to closely track student progress, both academic and wellbeing, and to also ensure we provide opportunities for students that are tailored to their individual strengths and needs.

Year 12 student Amelija Swaffer-Selff is a great example of our ability to provide opportunities for students. In 2017, at only 13 years old, Amelija was accelerated from Year 9 into Year 11. Now completing her senior studies over three years, Amelija continues to achieve at an A standard in subjects such as Chemistry, Physics, Maths C, Geography and Legal Studies. Additional to her academic success, Amelija is also a tennis prodigy, recently representing Queensland at the School Sport Australia National Tennis Championships. In most circumstances, a student with such ability would leave Moura to attend boarding school, however, due to our commitment to our students and our small size, we have been able to develop an individual program for Amelija which allows her to achieve both academic and sporting success.

Our staff work incredibly hard to ensure our students are provided with opportunities to succeed in areas outside of the classroom,



Cattle Club Students Connor Leeson, Abigail Cutting, Georgie Coombe, Lara Coombe and Dawson Foden following their success at Biloela Show

regardless of our context. Agriculture teacher Emma Oppermann engages up to 30 students in weekly Cattle Club sessions which build student skills in leading and judging cattle.

The commitment of Miss Oppermann and Cattle Club students has been consistently rewarded with numerous ribbons at shows around the region.

Unique to our school is our rock climbing wall which not only engages students in the physical activity of rock climbing, but also builds team work, resilience and

positive relationships. Students are able to climb both in class and as part of our rock climbing club and this is facilitated by the many staff who are trained on the wall.

Music teacher Shannon du Plessis, with assistance from local community member Alice May-Davies, has developed our school's vocal group from nothing 18 months ago to a group of over 30 students and staff. Their hard work was celebrated at the 2018 Biloela Eisteddfod where they received a number of awards and were invited back to perform in the final concert.

### High Expectations

The most essential pillar of our success over the past 8 years is the high expectations we have of our staff and our students. Our staff ensure that students follow through with the 'little things' such as respect for all, taking responsibility for their actions and demonstrating integrity. The little things hang upon the incredible leadership of our most experienced staff member, Head of Department Norah Parsons.

Norah has been at Moura SHS since the school's establishment in 1976. Today, she is now teaching second, third and even fourth generation students and leads by example by instituting the high expectations that our school follows. A celebrated maths teacher, Norah has in recent years been awarded the *Queensland Mines and Engineering Academy Outstanding Teacher Award*, *ASG National Excellence in Teaching Award* and the *Choose Maths Teacher Excellence Award*. Norah is one of the keys to our success and has created an astonishing legacy in our school community.

We continue to push outside our comfort zone at Moura High and live by our motto of '*Strive Today to Build Tomorrow*' to ensure we fulfil our vision of being '*more than just a school*'. It is via the key three pillars of our success that we will continue to nurture our students to becoming active community members.

Visit our website at [mourashs.eq.edu.au](http://mourashs.eq.edu.au) and take a look at our weekly newsletter for more information. ■

**By Joshua Duff,**  
*Moura State High School*



## Tools of the trade in a special needs classroom

**Teaching aids may help educators meet their obligations for inclusive education.**

THE path towards a truly inclusive education in Australia is one that is still being travelled.

Despite the best intentions of legislators and educators, experts warn that a lack of funding, resources and training are barriers to Australia meeting its obligations on the rights of the child.

However the rise of technology and a plethora of teaching aides and classroom resources may provide some assistance to teachers in the quest to support special needs students.

Teaching aids and resources are coming under the spotlight as effective ways to enhance the learning potential of students with a range of disabilities.



***New technology and a plethora of teaching aids and classroom resources may provide some assistance to teachers supporting special needs students***

Educators have an obligation under various international conventions and commonwealth legislation to ensure students with disability are given the same access to education and the same ability to participate.

Australia is a signatory to the *United Nations Convention on the Rights of People with Disability 2008*, which outlines education as a basic right.

The Federal Government's *Disability Standards for Education 2005* also sets out the obligations of educators to provide an inclusive

education for students with disability.

In meeting the educational needs of students with disability, individual states and territories vary in their approaches which may include:

- Enrolling special needs students in mainstream classes
- Modifying curriculum
- Providing teacher aides
- Holding special needs classes in mainstream schools
- Establishing special schools

Fully catering to the educational needs of students with a disability requires a rounded approach.

An Australian Research Alliance for Children and Youth Report, *Inclusive Education for Students with Disability* offer an example of best practice for classrooms which includes providing alternative

and adaptive curricula, inclusive pedagogy, quality teaching and individual planning.

Technological aids also rate special mention, with emphasis placed on the learning potential enabled by such innovations.

Assistive technologies – particularly those tailored to the physical and intellectual uniqueness of students – have been found to aid academic success, according to the report.

An issues paper by Dr Kathy Cologon, also noted “inadequate materials” as a setback to inclusive education along with a lack of planning time, inadequate education, professional development and insufficient personnel.

However Dr Cologon warns against placing too much emphasis on resources over other factors. ■

**By Kat Donaghey, Editor**





# Remote WA school leads the way, teaching STEM through an Indigenous lense



Indigenous rangers are intimately involved in the school's STEM learning.

**A remote Aboriginal school is gaining national recognition for blending Indigenous culture and Western science.**

Perched on the edge of the desert in WA's mid-west is a school so far away that it sometimes feels like the end of the earth. Here, a group of dedicated teachers at the Wiluna Remote Community School are pioneering a teaching method that is steeped in Indigenous culture. Working with elders and the local community, they use traditional knowledge to teach subjects such as science, maths and English – combining Aboriginal culture with Western methods.

The ground-breaking approach has won the school the *STEM School Award* at the *National Indigenous STEM Awards*, setting an example to other schools in Aboriginal communities.

*School News* magazine spoke to Wiluna's principal Adriano Truscott about the importance of engaging students in a way that has cultural meaning and relevance.



## **School News: Tell us about your school?**

**Adriano:** "Wiluna is about 1000km north-west of Perth on the Goldfields Highway.

"We are at the edge of the desert and more than 500km from the nearest cinema, Bunnings or Coles, so still pretty remote. What makes it a bit less remote is a bitumen highway.

"The school has 75 students on the books and the town has 200

to 300 people, with 14 non-Aboriginal people. We have one shop, a police station, no pub anymore and a rec centre.

"But we have beautiful surrounds, waterholes and an amazing amount of water.

"There is a lot of cultural connection between the community and Indigenous groups to the East and to the North. It's almost like a cultural crossroads and the kids move around a lot between different communities and spaces.

"We have about 85 to 90 percent attendance of children who are in Wiluna and about 50 percent of students are actually in Wiluna on any given day.

"Our school motto is "Stand Strong" which translates to Wiltu Ngara in the Mantjiltjarra language. It means to try your best, work hard, speak respectfully, being respectful of country, elders and teachers, help younger ones and work together.

"The school is actually more than 40 years old but the current school is new. In 2007 it was moved from its location next door to the pub to the other side of town."

## **School News: Why did you start incorporating Indigenous knowledge into the curriculum?**

**Adriano:** When I started here as a teacher in 2012 the ethos was that we needed to build community engagement and connection with a focus on health, language, culture and attendance. ►





◀ “We know that bringing in what kids know to the classroom and building on what they know promotes engagement.

“When I became the principal in 2015 I worked hard to have all classrooms go ‘on country’ with an elder or ranger and learn traditional culture which was brought back to the classroom.

“As a school we created a document which set out the year in terms of weather, animals, tradition. Around the table we had families, elders, mums brainstorming what happens throughout the year.

“So for example in June the goanna is fast asleep in its burrows. This is also a good time of year for fat bush turkeys. The dingoes are also around and it’s a good time for witchety grubs.

“This calendar is a cultural point of reference and we kept adding to the calendar over the year.

“It is used individually by each teacher for their classroom and they should go out ‘on country’ and find the tracks and follow them.

“For example if the goanna is fast asleep in its burrow, go and

find the goanna using traditional knowledge and then use science to learn how deep is the burrow, how does each species dig?

“Get the goanna and kill it and look to see what it has been eating.

“As another example we might have the K to 4 students head out with a ranger to track mallee fowl – so they’ll find the nests, see how they are made, the ecology, what the birds eat, look at their skats.

“They’ll take photos and talk about it later in class, sequence

it into a story with key words and develop or build vocab using the Martu language and scientific language.

“This process allows a lot of incidental learning and becomes a richer experience.”

### **School News: How important is community engagement?**

**Adriano:** The power of this program comes from working with the community and the Martu calendar.

Families who are rangers and







go out and look after the land are very much involved and help with the professional learning of teachers, with information on plants and animals and come on school trips.

"We have lots of rangers and key people, and an active team of about five or six people we can call on.

"We want to make sure the community feels involved and connected. When we have a community event we have everyone here and this has solidified community engagement.

"When the kids go to other schools they realise how precious what we have here is and they miss being really acknowledged for what they know.

"Kids can get success and learning with this way of doing things because they can teach the teachers. Engagement is not a one-way relationship.

"The community is in the game 100 percent because they want the program to continue."

### School News: What are the challenges of working in a remote Aboriginal school?

**Adriano:** It is hard to attract teachers who can respond to the demands of the country – living away from home, the cross-cultural context, language, graduates.

"Because the teacher turnover is so high there is not much time to get teachers to the right level.

"That's why we have decided to develop videos as a professional learning resource for our teachers

and we hope to have them on the ACARA (Australian Curriculum, Assessment and Reporting Authority) website and our website.

"We know that teaching and learning improves with continuity of practice but it can be hard when it is so different to what you are used to.

"We are accessing grants and developing partnerships to make sure that whatever happens we keep this going so we can embed it school practice.

"This program has redefined the relationship between school and community after many years of distance.

"It has been so exciting to see things get stronger and stronger term by term. It's rare to be part of something like this.

"I stay because I believe in it and because I love it. The community is gorgeous, the surroundings are beautiful. It really is a challenge being out here but only if you let it."

The program also links teachers and students with scientific research organisations and vocational education and training.

"For some time now there has been a lot of discussion about the low levels of involvement in STEM by Indigenous groups," says Cassandra.

"If we can get students more excited and interested and early then hopefully we can increase engagement in STEM." ■

By Kat Donaghey, Editor

## 'Two-way Science' teaching blends Aboriginal knowledge with Western Science

**Combining Aboriginal traditional knowledge with Western education methods has been dubbed "two-way science" teaching.**

Students, guided by their elders, head outdoors and learn 'on country' through traditional practices as well as Western scientific ways.

They then take the information, data and knowledge back to the classroom where the discoveries are linked to Western science and the Australian curriculum.

Wiluna Remote Community School is among a small number of schools in WA's western desert region pioneering the CSIRO's *Science Pathways for Indigenous Communities* program.

Wiluna won the *STEM School Award* in the *National Indigenous STEM Awards*.

The CSIRO's Cassandra Diamond says Indigenous students are able to learn better when the experience is relatable and presented in a context that is relevant to their lives and culture. "We try and match the science they are doing in school to projects 'on country'," says Cassandra.

"It creates a more awesome science experience."

Excursions and camps under the guide of elders are a significant component on the program's success, with students experiencing

traditional practices and learning through a cultural lense. The bush trips can vary from a few hours to week-long camps learning about cultural sites, traditional uses of plants, identifying animal tracks, trapping mammals and reptiles and monitoring water quality.

They may use scientific methods to collect data, observe flora and fauna and gathering specimens.

The information is then used as the basis of classroom activities and projects.

"We don't teach them culture; we provide a cultural context," says Cassandra.

"Aboriginal culture is the oldest continuous culture in the world, so it's about understanding and building understanding about what science Aboriginal and Torres Strait Islander people were doing and what knowledge they hold."

The program also links teachers and students with scientific research organisations and vocational education and training.

"For some time now there has been a lot of discussion about the low levels of involvement in STEM by Indigenous groups," says Cassandra.

"If we can get students more excited and interested and early then hopefully we can increase engagement in STEM." ■



# WHAT'S HOT

## THE LATEST TRENDING EDUCATION INDUSTRY PRODUCTS



### MBOT STEM ROBOT KIT

mBot is an open source affordable STEM robot kit, which is designed to inspire young engineers as they build, play and learn. From sensors used to follow complex line information and avoid obstacle, to multitasking remote control using the Makeblock APP, mBot is the perfect tradition to every classroom environment, or family scenarios easily teaching children entry-level programming. mBlock is a graphical programming software developed on Scratch 3.0 that works on desktop, tablet, ipad and smartphone, showing children the possibilities and fun of coding through controlling different functions of their mBots. Online courses are provided to help every step of the way. mBot has won the 2018 Family Choice Awards and 2018 Finland Kokoa Certification.

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### SUSTAINABLE CHOICES FOR OUTDOOR FURNITURE

Draffin Street Furniture recently added Australian made recycled plastic Satellite table settings to their extensive range of outdoor furniture. Environmentally friendly recycled plastic has a range of benefits that make it ideal for outdoor furniture applications. It doesn't peel, crack or rot, requires little maintenance and can easily withstand the harsh Australian environment. The highly pigmented colour is embedded in the plastic and protected by a UV stabiliser to prevent fading. Hard wearing and available in a vibrant range of colours, consider recycled plastic Satellite table settings for your next outdoor area project.

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# Teacher Practice Article

## – Attention Seeking Missiles

**Jo Lange, a behavioural psychologist whose work has been of immense value to educators for many years, refers to them as being Triple Ls – they're Late, they're Loud and they're Laughing. They wait until you have the 'audience' sorted, calm and focused until they switch on the spotlight and take centre stage. And when these students are on stage, they are world class performers.**

Of course, these students don't get paid quite like the Hugh Jackmans of the world. In fact, they have a different currency than money ... it's eyeballs. The pay-off for these students for the planning, effort, precision timing and preparation they've engaged in to make this moment an award winner is the attention of those around them.

This presents both the first victory and the first conundrum for Teachers when it comes to effectively dealing with attention seeking students.

The victory is that you've identified the motivator sitting behind the behaviour. This is critical because no behavioural choice occurs without a motivator. In adults, the motivator for losing weight might be fitting into the aspirational pair of expensive jeans we bought ourselves or feeling confident enough to don the swimmers on a looming beach holiday.

The motivator behind our choice to have a dinner party goes to one of our deepest needs, that of being socially connected. Every behaviour has a motivation and you've just identified the need being met by the attention seekers. There's gold in those eyeballs.

The conundrum is that yours are the only eyeballs you have control of in a classroom setting and there are plenty of other pairs available if you decide on suggested strategy no1 for attention seekers – ignoring them. It's a good strategy. But it's undermined by the other students who just can't take their gaze away from the shenanigans on display. We're going to need to get clever and a little subtle with our strategy here. Think again about that concept of currency. If attention can be measured in dollars, we might consider that a student has gone to \$1 worth of effort to get their attention pay-off. I'd contend that they'll be disappointed if they only get 5c worth of attention. So what does that look like in practical terms?

A teaching colleague of mine named Dave had a student enter his Year 11 Maths class and take his usual seat. During the Teacher's instructions,

the student slowly began reaching into his school bag and retrieving clothes pegs. One peg at a time, he attached clothes pegs to folds of skin on and around his face until he eventually built himself a mane of wooden pegs. Interesting move! And one clearly motivated and fuelled by the giggles and sniggers of the students around him. My colleague ignored him, but the behaviour persisted. He was already being well paid.

And then Dave remembered our conversation around the currency of attention and wondered what 5c worth of attention might look like, given the clear \$1 of effort this student has gone to. He walked over to the student and stood briefly by his side – a clever tactic in itself as being side-by-side eliminates virtually all eye contact while directing attention to the people that Dave also wishes to better engage.

With eyes fixed on the other students in the class, he gently nudged "Pegboy" on the shoulder and said "That's a pretty good impression of the Paddle Pop Lion, mate.

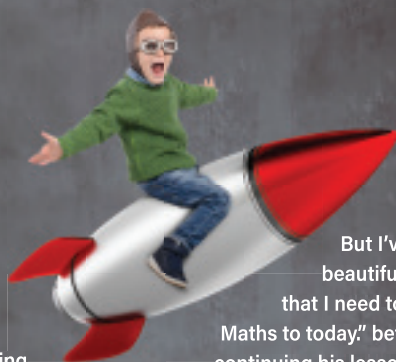
But I've got these beautiful people here that I need to teach some Maths to today," before calmly continuing his lesson.

The class chuckled once more and then commenced to engage with the Teacher's instruction again. Pegboy, after enduring a few more painful minutes (seriously – that's got to hurt!) then began removing the pegs and returning them to his school bag.

I asked Dave what he thought the real lesson was in the tale of Pegboy. He said the provision of zero attention by the Teacher was being read by Pegboy as a "not yet" in terms of attention and so he chose to hang in there to see if a bigger pay-off was coming than that being provided by the classroom giggles. But, when the pay-off arrived in a rather disappointing low-key acknowledgement and calm redirection of the remaining students, Dave believed the internal dialogue of Pegboy would have been something along the lines of "Oh bugger. Well that was hardly worth all that trouble."

Hardly worth all the trouble. That's a decent and effective mantra that we could all carry into our next encounter with the spotlight seekers that seem to be in almost all of our classrooms these days. ■

**By Adam Voigt**





# So, you want to be a school principal?

**Teachers who want to make the leap are advised to complete a postgraduate course in Educational Leadership.**

The role of a school principal has intensified significantly in recent decades to the point teachers who aspire to leadership positions are now encouraged to undertake postgraduate studies.

Overworked, stressed and burnt out are some of the words used to describe today's principals who are weighed down by ever-increasing accountability demands from governments, parents and society.

A survey released earlier this year found that one in five principals is overwhelmed by workplace stress, with the workload described as unsustainable.

The Australian Catholic University survey of 2800 principals, deputy principals and assistant principals also found half had faced threats of violence while one-third had experienced violence.

Central Queensland University's (CQUniversity) Professor Alison Elliott says teachers are less inclined to make the leap to becoming principals because of limited professional development and mentoring opportunities in the sector.

"It's an extremely complex job and you do need specialist skills to be effective in the role," she says.

Professor Elliott says many universities now offer post graduate courses ranging from masters degrees to graduate certificates to help prepare teachers who want to pursue a career at the head of a school.

The tertiary educational leadership courses are designed for aspiring principals, deputy principals and assistant principals, differing in emphasis depending on the university.

Australian Secondary Principals' Association (ASPA) president Andrew Pierpont says post graduate qualifications are advantageous however he warns about selecting the right course.

"In my experience there are a lot of

courses that focus on management and not leadership and there is a vast difference between the two," says Andrew.

"The content of the course needs to be just so. It needs to be a blend of practical and research. Like teaching it's one thing to learn how to teach and it's another to get up in front of 30 students and do it."

## Industry viewpoint

Masters degrees which take a number of years or online graduate certificates which can be done in the student's own time are some options available to senior teachers who want to step up to leadership positions at school.

## Eligibility

Professor Alison Elliot, who coordinates CQUniversity's *Graduate Certificate in Educational Leadership*, says post graduate study is recommended for senior teachers who have a number of years in the classroom under their belt.

A teaching qualification and teacher registration are required for enrolment in most cases.

For CQUniversity's graduate certificate, teachers are also expected to be employed in an education setting so as to undertake the practical components of the course.

"The graduate certificate is designed for teachers working in a school so they can relate the assessment to the workplace and get involved with the community, staff, families and stakeholders," she says.

## Study options

Attending physical lectures and workshops is no longer a necessity in tertiary education, with many university students now able to fit study around the demands of life.

Professor Elliott says CQUniversity's graduate certificate is an online only course that includes four units which students may choose to study singly or in pairs, completing the course in six months or a year.



CQUniversity's online *Graduate Certificate in Educational Leadership* prepares teachers for principal roles.

"Universities suggest about 10 to 15 hours of study per week, per subject," she says.

"We also understand that people are very busy with work, families, commuting and want to be able to study at a time that suits them."

## Qualifications

Although a postgraduate qualification is not necessary to becoming a principal, Professor

Alison Elliott says it does help in an age where school leaders face intense pressures.

"Educational leadership courses are advantageous for seeking executive and leadership positions in schools," she advises.

"It is rare these days to be going into a principal role without a post graduate qualification." ■

**By Kat Donaghey, Editor**



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"It definitely helped with my knowledge base, and gave me more confidence. I've just got my first job as principal – I would absolutely, highly recommend it."

– Danielle, Graduate Certificate of Educational Leadership

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# Promoting the wellbeing of students *and* teachers is the key to successful learning

**We know that social and emotional learning (SEL) is important for academic performance.**

In a large study by Durlak et al (2011) of more than 260,000 students, it was shown that when SEL skills were explicitly taught, not only did their personal and social capabilities improve, their academic outcomes improved by about 11 percent. We also know that incorporating SEL into teaching and learning, gives students opportunities to practice essential skills for positive mental health. And we've seen that promoting SEL skills in children and young adults can improve health and subjective wellbeing, as well as reduce antisocial behaviours.

Take one look at the SEL framework and you'll probably be able to identify why this teaching



Mimma Mason

approach is so powerful. SEL goes beyond helping students achieve good grades to enhance their intrapersonal, interpersonal, and cognitive competence.

#### It promotes:

1. **Self-awareness:** Helping identify emotions, an accurate self-perception, recognise strengths and weaknesses, and build self-confidence.

2. **Self-management:** Teaches students to control impulses, manage stress, motivate themselves, set goals, and stay organised.
3. **Social awareness:** Which teaches the valuable practice of perspective-taking, as well as empathy, respect for others and an appreciation for diversity.
4. **Relationship skills:** Including communication, listening, social engagement, relationship building, and teamwork.
5. **Responsible decision-making:** Which teaches students about their ethical responsibilities and helps them learn how to identify and solve problems, analyse situations, evaluate, and reflect.

In short, when we teach SEL skills, we promote the wellbeing of students and simultaneously move them forward in their learning.

Having said that, teachers already know how important wellbeing is, but knowing what to do about it is the real challenge. Ideally, educators would have access to tools that help monitor behaviour, learning and thinking skills like attention and problem solving. Because once a student's strengths and weaknesses are identified, there's a clearer and more personalised pathway to managing and improving learning outcomes.

**Teacher wellbeing is just as important as student wellbeing**

Just like an oxygen mask on a plane, wellbeing starts with you

## Great schools have great leaders



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first; you can help others more effectively when you've attended to your own wellbeing. This is precisely why teachers need to take care of their own wellbeing before attending to the wellbeing of their students. Even the most capable teacher cannot pour from an empty cup. When they try to do so, they will suffer – and so too will their students.

Research is increasingly showing that teacher wellbeing and student wellbeing are two sides of the same coin. One study found that promoting teacher wellbeing can enhance the capacity of schools to meet the needs of diverse student populations. This is likely to reduce the numbers of pupils needing intensive support – especially for social and behavioural difficulties but also for learning needs.

Yet a nationwide survey conducted by ASG in 2017 showed that half

of the teacher population feels stressed 'most of the time' or 'fairly often' in a typical week.

This might just be a top-down effect. The 2017 *Australian Principals' Health Survey* found that principals experience:

- Workplace demands that are 1.5 times higher than the general population
- A far higher prevalence of offensive behaviour at work than the general population
- High levels of stress caused by the "sheer quantity of administrative work" they are required to perform
- Additional stress due to the lack of time they have available to focus on teaching and learning.

This makes them subject to

higher levels of burnout, difficulty sleeping, and depressive symptoms.

### The solution?

Ideally, teachers and principals would be given opportunities for personal growth and professional development. They'd be encouraged to nurture relationships with one another and with their students. Working as a team on wellbeing issues is itself a great opportunity to build efficacy and gain recognition for their work.

Opportunities for staff to participate in professional development are also very valuable. Teachers are passionate about learning – that's why they became teachers in the first place. PD helps us learn more about learning, share insights and experiences with other professionals, take the time to

think about ourselves and build a community of practice.

At the end of the day, student wellbeing and learning begins with educator wellbeing. The best way to ensure our pupils experience success at school is to make sure teachers and principals have their oxygen masks on. ★

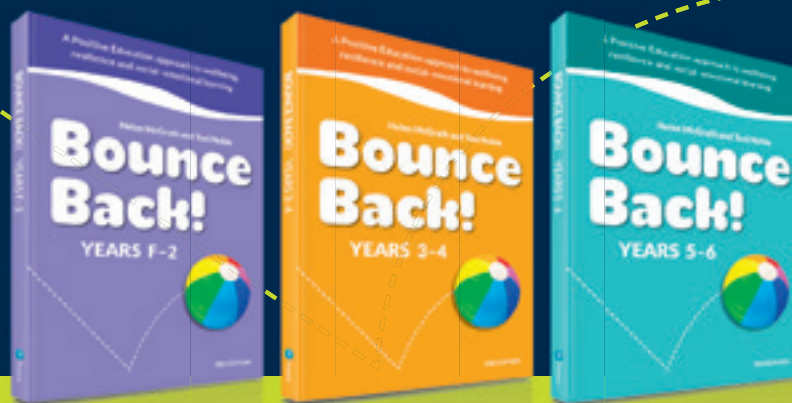
**By Mimma Mason**

**Mimma Mason**, for the past 10 years has worked in education and cognitive science with clinicians, educators, coaches and workplace health professionals to raise awareness of brain health. She's particularly interested in how to measure brain health and improve everyday functional wellness and performance. She runs professional development workshops around the science of learning: working memory, wellbeing and literacy, differentiated learning, and response to intervention.



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# How can we build a sustainable workforce?

**Teacher stress is high, in fact teachers exhibit higher levels of stress than any other profession (Stoeber & Rennert, 2008). Whether this be day-to-day stress of required tasks or institutional stress factors, teachers are struggling (Curry & O'Brien, 2012).**

As teachers battle exhaustion, they struggle to cope and remain buoyant to the increasing social and emotional demands placed on them, which directly impacts wellbeing (Parker, Martin, Colmar, & Liem, 2012). How do I know this? Because I too am a teacher.

Supporting teacher wellbeing is crucial because; "Teachers worn down by their work exhibit reduced work goals, lower responsibility for work outcomes, lower idealism, heightened emotional detachment, work alienation, and self-interest. When teachers become burned out, or worn out, their students' achievement outcomes are likely to suffer because they are more concerned with their personal survival." (Richardson, Watt, & Devos, 2013, p. 231).

Wellbeing is a broad and complex area that when discussed in a school arena, is typically centred on meeting student needs. Yet go into any staffroom and the topic of conversation will be centred around how tired, stressed and overwhelmed teachers feel. While burnout is high in experienced teachers, of greater

concern is the attrition rate of beginning teachers who leave the profession because of a "lack of congruence between expectations for one's career and the actual reality of the work" (Curry & O'Brien, 2012, p. 179). The one thing we do know is that in order for students to be well, teachers themselves must also be well (McCallum & Price, 2010). So, what are we doing to support teacher wellbeing?

Thankfully, we are now starting to see interventions that support teacher wellbeing, beginning to feature alongside student wellbeing programs (Jones et al., 2013). A major contributor to this is the rise of evidence-based interventions coming from the field of Positive Psychology, known as the science of wellbeing. Positive Psychology is a field of inquiry concerned with what makes communities and individuals thrive (Waters & White, 2015). Instead of exploring a deficit model of what is not working by asking questions such as 'What is causing teacher stress?', it looks at what is working by asking 'What does teacher wellbeing look and sound like?'

This means sharing with teachers proactive strategies they can use on a daily basis to build better habits of wellbeing. One place to start could be considering the 5 main dimensions of wellbeing, eg;

- 1. Cognitive wellbeing** – Strategies to manage mental fatigue that comes



Daniela Falecki

from decision overload

- 2. Emotional wellbeing** – strategies to manage personal stress and anxiety
- 3. Social wellbeing** – strategies to manage social connections and personality differences
- 4. Physical wellbeing** – strategies to support healthy nutrition, sleep and exercise
- 5. Spiritual wellbeing** – strategies to build a sense of value and purpose

In saying this, it is important that any teacher wellbeing initiatives are evidence based and do not just come from personal opinion. This is where the research in

Positive Psychology can offer schools simple, yet effective strategies to promote not only student wellbeing but staff wellbeing too.

These evidence-based interventions can range from reflecting on being our best possible self, keeping a gratitude journal, mindfulness practices, performing acts of kindness, modelling our own growth mindset, setting and achieving our own goals, and identifying our character strengths as well as spotting them in others, just to mention a few.

The bottom line is, the best place to start when wanting to build teacher wellbeing is to create the space of proactive conversations. Instead of discussing how much





is on our to-do lists, let's discuss our achievements, instead of reliving challenging events in our meetings, let's share examples of success.

Does this mean we ignore the negative stuff when it happens? No, it just means we don't focus on it by having the same conversations over and over. The Chinese word for 'crisis' is composed of two Chinese

characters respectively signifying "danger" and "opportunity". When we look at the data of teacher stress and burnout it would be fair to say the wellbeing of our teachers is in crisis, the great news is that we have an opportunity and the evidence to do something about it. ★

**By Daniela Falecki,**  
Founder and Director,  
Teacher Wellbeing

*Daniela Falecki is known as the "keep-it-real" teacher who specialises in Positive Psychology. Her passionate, practical approach makes her a sought-after speaker, sharing stories from her 20 years' experience in schools. Her insights are realistic, evidence based and most importantly based on experience. Daniela also lectures at Western Sydney University, is a Senior Associate for Dr Suzy Green and the Positivity Institute, and is the developer of many Nationally accredited mentoring and coaching programs for teachers. Daniela has been the NSW Manager for the Outdoor Education Group, program developer for International College of Wellness Coaches and is a member of the ICF (International Coaching Federation). She has completed a Masters in Education (Leadership), a Bachelor of Education (Physical & Health Education), a Diploma in Rudolf Steiner Education, a Life Coaching Certificate (Life Coaching Academy) is a Master Neuro Linguistic Programming practitioner and was voted Lecturer of the Year 2014 at Western Sydney University.*

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# Using the transformative power of theatre to enhance student wellbeing

**Something happens when we go to school. Yes, we learn to read, we learn to write, to count, we learn about history, geography, languages, how our world works - all wondrous, valuable things.**

We also learn, very quickly, that learning is measured and should be tested, constantly. We learn that data drives schools and policies, and that one's worth is often tied up in those final results. And in that, we lose our sense of play, of discovery, of creativity. Ken Robinson, in his seminal Ted Talk *Do Schools Kill Creativity?*, argues that our schooling systems are "educating people out of their creative capacities" and that we are not only growing out of our creativity, but "we get educated out of it".

Alongside this, schools are becoming increasingly aware of the need to nurture and implement wellbeing programs that foster agency, resilience and self-management strategies. When children are a part of a system, however, how can we do this?

This is why I became a drama teacher and whole-heartedly believe in the importance of the arts, and in particular, drama, for enhancing students' education and wellbeing. It is through drama that children have the opportunity to engage in embodied, aesthetic, experiential learning; it offers, according to John O'Toole, the Chair of Arts Education at the University of Melbourne, "a way of knowing that is not replicated elsewhere in the curriculum" [1].



Theatre can be used in education to enhance student wellbeing.

So how can theatre in education be used to enhance student wellbeing?

I have taught in a range of schools across Australia and currently, in Europe. I have seen firsthand the positive impact of creating and seeing theatre on student wellbeing – whether it is through participation in school theatre productions, devising their own shows, or watching performances by theatre in education companies.

I recently devised a performance with a group of middle school students exploring issues that were important to them. Not only were students able to participate in a shared experience, which gave them an enormous sense of belonging, but the process also provided them with invaluable problem solving, group work and interpersonal skills. By having ownership over their own stories, these students developed a greater sense of self. It was through this experience that they were able to explore, experiment, create and play. Ultimately,

they saw issues from different perspectives, and they found their individual voice. They were transformed.

Drama is about transformation – the transformation of stories, of spaces, of breaking down screens, and sharing a powerful experience in a live environment. Not every school, however, has the resources to take students to the theatre, or the time and money required to produce a school performance. So, it is through theatre in education companies that theatre can be brought to the child – not only for the artistic value, but as an essential resource for student wellbeing programs.

If drama provides a different way of knowing, it is these types of educational theatre performances that offer a practical way to support resilience programs for students. Theatre in Education companies, such as Brainstorm Productions, offer invaluable support to schools. They not only provide students with the opportunity to engage in high quality theatre, but also, and perhaps more importantly, they provide practical strategies for students and classroom resources for teachers. This is transformative art that pushes beyond the stage.

By bringing theatre to students, we can expose them to a broad range of theatrical styles. We can show them that theatre is a powerful tool to start conversations, to explore, and to understand. It is through theatre that students can really start to perceive their world through different lenses, and develop a deeper understanding of themselves. This can only add value to the school curriculum, as it helps students engage with the demands of an ever-changing world with compassion, intelligence and resilience.

We know that the responsibility we have as educators expands beyond the classroom. We know that the students we teach will be stepping into a vastly different world to the one we grew up in. And we know they will need a unique set of skills to deal with that world. We know that shared experiences, storytelling, inclusion and empathy help children become strong, compassionate humans. We know that theatre in education can and does transform, and has a strong place next to any wellbeing program. Let's create, play, and bring live theatre to the children! ★

**By Leigh-Anne Robinson**

## References:

[1] O'Toole, J. & Dunn, J. (2002). *Pretending to Learn: Helping Children through Drama*. Pearson Education: Australia.

## Crisis helplines:

Support is available for anyone who may be distressed: Lifeline 13 11 14; Kids Helpline 1800 55 1800; Suicide Call Back Service - 24/7 Helpline 1300 659 467. If you or someone you know requires immediate assistance, please call Emergency Services (000) or Lifeline (13 11 14).



**Leigh-Anne Robinson**, a drama and English teacher who has taught at a range of secondary schools in Queensland and Victoria, and is currently teaching at the Berlin Metropolitan School. She has a Bachelor of Creative Industries (Drama) and a Post Graduate Diploma in Secondary Education (Drama and English) from Queensland University of Technology.



# Are you always "busy"?

The most common response you'll hear when you ask someone who works in a school how they are, is, "Busy".

Being busy has acquired a new status. It is now equated with importance.

Many educators only know two speeds – flat out and asleep. We often rush from one priority or crisis to another. While we often feel overloaded, somewhere inside we also like the sense of being indispensable and in-demand. This is typical of an adrenaline junkie. Adrenaline junkies are susceptible to packing their days to the brim. The trap is that being busy can add up to lots and lots of activity that isn't all that productive in the end.

In his book *The Advantage*, Patrick Lencioni highlights 'The Adrenaline Bias'. "Many leaders suffer from a chronic case of adrenaline addiction, seemingly hooked on the daily rush of activity and firefighting within their organization" (2012). I believe that many educators suffer this bias.

The feeling of an adrenaline high is addictive as it gives you a 'rush'. When you are on adrenaline you think quickly, talk quickly, eat quickly and



Steve Francis

even finish other people's sentences. You try to be 'on' 100 percent of the time. However, the rush that we get from adrenaline is not sustainable and isn't helping us. If the entire day is fueled by adrenaline, it can lead to burnout and also makes you less fun to be around. If you have been an adrenaline junkie for some time, you may have lost the ability to relax (Church 2007, page 29).

There are two ways to get a natural high – one from adrenaline, which makes you feel switched on for short bursts; the other from serotonin, which makes you feel calm and comfortable for longer periods.

The real natural high comes from an appropriate balance of both adrenaline and serotonin. The first step is becoming aware that you may be an adrenaline junkie.

If you do everything in fast



forward you need to slow down and make some space in your life. When you learn to switch onto adrenaline only when you need to, and manage the rush in a healthy, balanced way, you can be naturally high more often, rather than using your 'drug' to get through everyday life (Church, 2007, page 29).

## Here are 12 actions you can implement immediately

### Take responsibility for your own personal wellbeing

Many educators put themselves last. They work long hours tirelessly trying to be all things to all people. Looking after your own

wellbeing needs to be a priority.

### Undertake a thorough health appraisal every year

Early detection is often better than pursuing a cure.

### Replace the term work-life balance with work-life satisfaction

'Balance' can be very difficult to achieve. It is more important that we get satisfaction from our work as well as the other aspects of our lives. Instead of aspiring for work-life balance, aim to get work-life satisfaction.

### Set boundaries on your work hours

No matter how many hours

you work, there is always more that could be done. It is vital to set boundaries to stop work overtaking and having an impact on the other aspects of your life. Which day of the week could you leave school at 3.30 pm and do something for you?

### Monitor your self-talk

It is vital that you monitor that little voice inside your head and ensure that your expectations of yourself are reasonable. At times educators can be our own harshest critic. At the end of each day you should reflect on what you have achieved and not be too harsh on yourself if there are still tasks on your to-do list. School days can be unpredictable.



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## The National Education Summit

31 August - 1 September 2018

Melbourne Convention and Exhibition Centre

The National Education Summit is a meeting of educational minds. The summit draws principals, school leaders, business managers and educators from K-12 to share ideas, problem solve and learn.

[www.nationaleducationssummit.com.au](http://www.nationaleducationssummit.com.au)

## iOnTheFuture5: 'Into The Deep'

25 August 2018

This will be the 5th event of its kind in the past 6 years. The day will feature Larry Rosenstock from High Tech High. Participants will be inspired with keynotes and presentations from Larry Rosenstock, but also Mark Scott, Libby Woodfin, Marc Chun, Michelle Navarre and Michael Priddis. Organisers say the last event attracted 700 teachers from 161 schools.

[www.deeperlearning.com.au](http://www.deeperlearning.com.au)

## The Education Show

31 August - 1 September 2018

Melbourne Convention and Exhibition Centre

Part of The National Education Summit, The Education Show includes 100+ exhibitors showcasing school resources, products, services and technology for classrooms, schools and careers.

[www.theeducationshow.com.au](http://www.theeducationshow.com.au)

## Australian Council for Computers in Education (ACCE) Conference

2 - 8 October 2018

Royal Randwick Racecourse, Sydney

The theme is ImpaCT, and presenters will demonstrate how we can ensure maximum effect on student learning using the technologies we employ.

The conference will also undertake a 'health check' on the rollout of technology curriculum and ensuring the many resources produced to support this can be shared.

[www.acce2018.com.au](http://www.acce2018.com.au)

## Australian International Education Conference (AIEC) 2018

9 - 12 October 2018

International Convention Centre, Sydney

The theme of AIEC 2018 will be 'Empowering a new generation' and will feature a host of sessions, workshops, roundtables, an exhibition and social events attracting world-leading experts and representatives from all education sectors as well as government, NGOs and private providers. The call for proposals will open in January 2018, and registrations open in June 2018.

[www.ieaa.org.au](http://www.ieaa.org.au)

## ICME 2018: 20th International Conference on Mathematical Education

3 - 4 December 2018

Sydney, NSW

The conference aims to bring together leading academic scientists, researchers and research scholars to exchange and share their experiences and research results on all aspects of mathematical education.

[www.waset.org/conference/2018/12/sydney/ICME](http://www.waset.org/conference/2018/12/sydney/ICME)

## Transnational Curriculum Inquiry: Challenges and Opportunities in a Changing World

10 - 12 December 2018

The University of Melbourne, Vic, Australia

The conference, under the auspices of the International Association for the Advancement of Curriculum Studies (IAACS), will be co-hosted with the Australian Curriculum Studies Association (ACSA) and the Australian Association for Research in Education (AARE). The conference will have an explicitly international orientation, with a view to furthering the project of transnational curriculum inquiry, albeit drawing on what are often distinctively national perspectives, and working within and across them.

[www.iaacs2018.info](http://www.iaacs2018.info)

## Australian Council for Health, Physical Education and Recreation (ACHPER)

14-16 January 2019

Australian Institute of Sport (AIS)

This year's theme is Reconfiguring HPE, Sport and Recreation to Enrich Communities and will have both national and international appeal, showcasing contemporary and future focused ideas. The conference is designed for Health and Physical Education professionals and health, sports and other industry stakeholders. Keynote speakers include Tom Martinek, a professor in the Department of Kinesiology, University of North Carolina at Greensboro (UNCG) and Jan Wright, an Emeritus Professor in the School of Education, Faculty of Social Sciences at the University of Wollongong.

<https://www.achper.org.au/professionallearning/2019-achper-international-conference/find-out-more-about-the-2019-international-conference-in-canberra>

### ◀ Prioritise ruthlessly

Time is one of the most precious resources you have. It is vital that you use it well. Ask yourself often, "Is this the most important thing I could be doing with the time I have available?" A good way to feel that you are gaining traction is to identify at the beginning of each day, one important task that you need to make sure is completed that day, for that day to feel successful.

### Clearly communicate that harassment and violence are NOT tolerated

It is a sad reflection on our society that many public hospitals now display "Zero Tolerance to Abuse" signs clearly communicating that harassment and violence towards staff will not be tolerated.

### Book a holiday - every break

It is vital that you take some time each school holidays to rest and recharge. A holiday doesn't have to be extravagant. Even if you only go away for a night or two, the change of scenery and short break are worthwhile. The anticipation of the holiday can be almost as good as the holiday itself.

### Establish and commit to an exercise routine

Exercise has benefits for both our physical and mental health. Establishing an exercise routine is one of the most powerful actions you can take.

Often when people get busy and stressed, the first thing they stop doing is exercising. Yet exercising is the best thing they could do for their well-being.

### Stop for lunch

We know eating well is important to looking after our health but we often skip lunch, eat on the run or at our desk. Take at least 15 minutes away from your desk to stop and eat lunch.

### Drink more water

We should drink at least two litres of water per day. This equates to about eight glasses of water.

### Seek expert help if feeling overwhelmed

If you are feeling over-whelmed, seek professional support. It is not a sign of weakness but a

recognition of the real complexity of the role you play.

### Time for some tough love!

Are you hooked on the adrenaline of being 'busy' and feeling 'needed'? Are your own expectations of yourself realistic? Is your self-talk positive or are you your harshest critic? ★

By Steve Francis

References: Church, M 2007, *High Life 24/7 - Balance Your Body Chemistry and Feel Uplifted*, Thought Leaders, Sydney, Australia.

Lencioni, P 2012, *The Advantage - Why Organizational Health Trumps Everything Else in Business*, Jossey-Bass, San Francisco, United States.

Steve Francis, created the Happy School program to improve staff well-being and reduce stress in schools. Steve works with great school leaders and staff to optimise their schools. He is the author of four books including "First Semester CAN MAKE OR BREAK YOU!" and "Time Management For Teachers".





## NEW TO THE BOOKSHELF



### **Pearl the Magical Unicorn**

By Sally Odgers and Adele K Thomas, Scholastic Books, Age 6+

From the author who brought us the Sydney 2000 Olympics mascot books comes *Pearl the Magical Unicorn*, a hilarious story about a clever and determined unicorn. Pearl doesn't quite know how to use her powers and what happens when she and her friends accidentally stumble upon the gobble-un creatures?



### **Something for Fleur**

By Catherine Pelosi and Caitlin Murray, Lothian Children's Books

Sydney-based author Catherine Pelosi and illustrator Caitlin Murray bring the tale of Fleur the flamingo's birthday. Her friend Bo the hippo is sending her a present and readers can use Bo's clues to guess what it is. Could it be ice-cream mountains to slide down, or ten-tiered cakes for all the town? Or maybe it's the best present of all – a big hug from your best friend. Catherine Pelosi has a love of animals that often feature in her stories while illustrator Caitlin also designs for a toy company.



### **Ella Diaries: Goal Power**

By Meredith Costain & Danielle McDonald, Scholastic, Age: 7+

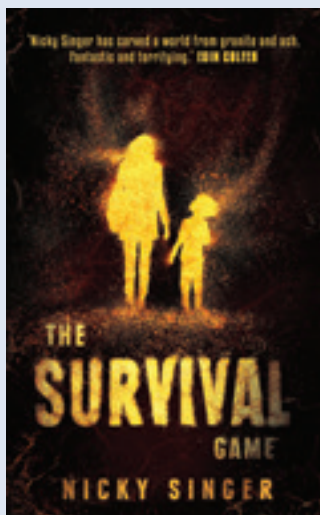
Former teacher Meredith Costain has written a book about friendship and fun. Ella is super excited to be part of a girls' only soccer club and dreams of being a striker and scoring all the goals. But then she discovers she can't dribble a ball, can't pass and can't kick! Will she ever be chosen for the team? Meredith Costain is an award-winning writer whose first picture book, *Musical Harriet*, was adapted for television by the ABC.



### **The 13th Reality #2 Hunt for Dark Infinity**

By James Dashner, Scholastic, Age 12+

Tick's journey continues as he and Mistress Jane are prompted by a suspicious set of messages to race to find the deadly Dark Infinity weapon. The second book after *13th Reality: Journal of Curious Letters* which introduces readers to the fantasy genre, exploring scientific possibilities and quantum physics with thirteen-year-old Tick. Written by James Dashner, the author the Maze Runner series, now a major motion picture movie franchise.



### **The Survival Game**

By Nicky Singer, Hodder Children's Books

Author Nicky Singer had amazing success with her first children's novel, *Feather Boy*, which won the Blue Peter Book of the Year Award, was adapted for TV (winning a BAFTA for Best Children's Drama) and commissioned by the National Theatre as a musical. This book tells the story of Mhairi Anne Bain who owns only two things: a gun with no bullets and her identity papers. The world is a shell of what it once was and Mhairi has learnt the importance of living her own story, of speaking to no one. But then she meets a young boy with no voice at all, and finds herself risking everything to take him to safety.



### **Fantastic Beasts: The Crimes of Grindelwald**

By JK Rowling, Hachette

Here's one to look out for in November with the movie release of JK Rowling's *Fantastic Beasts: The Crimes of Grindelwald* in cinemas. A book of the movie's screenplay will be released on November 16th to coincide with the film. The book's cover gives away some clues that hint at the film's story which follows from the first movie *Fantastic Beasts and Where to Find them* from 2016.

# An innovative way to soar through education

## The sky's the limit for students tackling real-life challenges with drone technology.

Year 3 teacher, Danni Brooke loves her students' excitement when they are handed a drone to fly.

"It's just sheer joy on their face when you see a student fly a drone for the first time and have it hovering," says Danni.

"It's a feeling of success; it's something new; it's dynamic, and it can draw kids to STEM subjects who might not have been interested before."

Drones are gaining popularity in many industries that have realised the untapped potential of unmanned aerial technology.

From the military, which uses drones in place of manned aircraft, to surf lifesaving where drones are used to delivering life vests to stricken swimmers; environmentalists are even using drone technology to film animal documentaries, and rescue missions benefit from being able to quickly survey dangerous terrain.

The cost of aerial technology has also reduced, with cheaper drone models now available for less than \$100. Others reach the several-thousand-dollar mark, giving schools various specification options and levels of complexity to work with.

As a form of learning through play, the devices are lightweight but durable and can be purchased with a range of accessories, including cameras, landing pads and cannons.

Danni teaches at Peregrine Springs State School, a primary school on the Sunshine Coast in Queensland that has a strong focus on technology.

The school purchased ten drones small enough for students to hold in their hands; they are shared between all classes, from Prep to Year 6, across a variety of subjects, including technology, maths, science and geography.

Teachers have been experimenting for about a year to work out



different ways they can integrate drones with the curriculum.

What they discovered is that the "sky's the limit" when incorporating the remote control devices into everyday learning and linking the technology to real-world experiences.

"I think in education we are at the beginning of the 'drone era' and we are feeling our way around a bit," says Danni.

"Of course, there are the obvious subjects where drones fit in, like digital technology, which is now a subject mandated by ACARA," says Danni.

"You can use drones for maths to work out angles, locations, time, speed and coding. We use block coding, where you insert the codes to program the drone to fly where you want it to.

"There's electronics, where you can focus on things like the wiring but you can also integrate drones with subjects like history, geography, and even English."

As a practical example, Danni revealed that Year 4 geography students used drones on their

recent field trip to study erosion, with the drone camera filming footage of the eroded land for students to take back to the classroom and examine.

Students also tackle drone obstacle exercises in which they navigate the device to simulate tasks, such as flood mapping, dropping life vests to drowning ocean swimmers or searching for coastal rubbish.

"We try to give a purpose for everything and for them to have a hands-on, immersive experience," says Danni.

"It's fun; it's learning through play; it's complex problem-solving and analytical thinking. It teaches perseverance, precision with flying and working in groups.

"We have our students work in pairs, so you have a pilot and a co-pilot. You need two people because the co-pilot has to keep an eye on the battery; you can't keep flying under 20 percent battery.

"So the co-pilot also has to stay focussed and instruct when it's time to land. They also give moral support, direction and positive talk."

Training starts in Prep, where students learn to hover the craft, and continues through the older years where the experience increases in complexity to include detailed coding and manoeuvres like flips.

All students are required to adhere to a safety checklist, wear safety glasses and avoid walking into the fly zone.

Later this year, students from neighbouring schools will be invited to take part in a *Dual of the Drones*, which will enable

Peregrine Springs State School to share what its students and teachers have learnt.

Competitors will take part in a coding challenge, where they have to code a device to undertake activities such as 'looking for turtle nests' and 'spotting sharks'.

Danni says teachers have nothing to fear about embracing the new technology.

"We all support each other and learn from each other and the kids love it!" ■

By Kat Donaghey, Editor



# Get students excited about science and maths with robotics and electronics

**Federal Education minister Simon Birmingham's address to the Australian Science Teachers' Association conference outlined the nation's concerning performance in STEM subjects.**

Not only are Aussie students' results in maths and sciences declining by international standards, enrolments in these subjects in high school and university are also decreasing.

At a time when smart devices are a fact of everyday life and the future is imagined as robot-centric, today's students have been losing interest in the very subjects that sustain the digital world and spark innovation.

Mr Birmingham pointed to potential reasons for the waning interest in STEM subjects, fingering out-of-field teaching as one likely contributor.

"It's unacceptable that secondary school students are taught science or maths subjects by people without specialist skills in science or maths," he told the conference.

"We need more...science teachers devoted to the cause, passionate and interested and committed to this vital area of learning."

However across the country many teachers are already taking the initiative to get kids excited about



Team members working on the robot in the pits before a match

STEM through the introduction of robotics and electronics activities.

Digital Technologies is part of the Australian Curriculum for Prep-10 with the aim that students develop the knowledge, understanding and skills to ensure that, individually and collaboratively they can:

- design, create, manage and evaluate sustainable and innovative digital solutions to meet and redefine current and future needs
- use computational thinking and the key concepts of abstraction; data collection, representation and interpretation; specification, algorithms and implementation to create digital solutions
- confidently use digital systems to efficiently and effectively automate the transformation of data into information and to creatively communicate ideas in a range of settings
- apply protocols and legal practices that support safe, ethical and respectful communications and collaboration with known and unknown audiences
- apply systems thinking to monitor, analyse, predict and shape the interactions within and between information systems and the impact of these systems on individuals, societies, economies and environments.

Robotics and STEM electronics are seen as innovative learning tools to fulfil the Australian curriculum.

## Industry opinion

### What is robotics?

The word robot conjures images of mechanical humanoids programmed to follow instructions. However robotics come in a number of guises, from small machines resembling rovers to basic platforms of switches similar to the inner workings of a computer.

The basic concept of robotics and STEM electronics is programming a device to follow instructions – whether it be flashing a light, following a route or flicking a switch, for example.

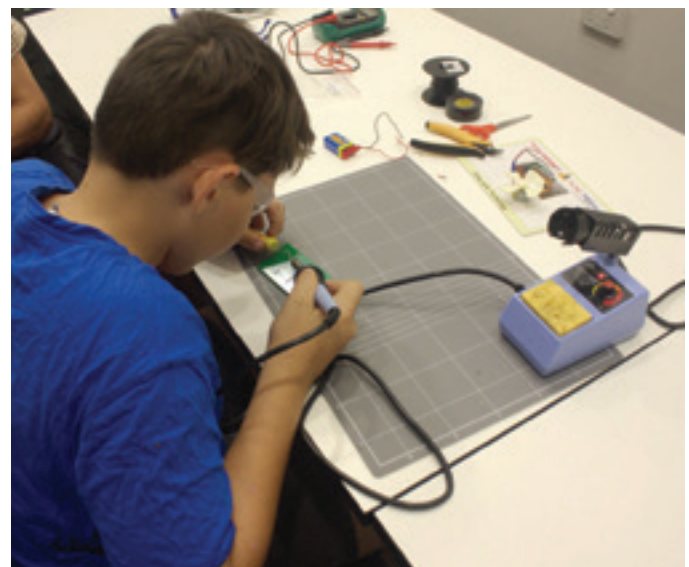
Robotics kits designed for schools have been simplified for the ages and abilities of students and operate by students programming basic coding instructions.

Altronics marketing manager Ben Lowe says robotics and electronics satisfy students' hunger for using their hands to create and build.

"Everyone points to artificial intelligence and robots as being important parts of our future so it is helpful for children to have a basic understanding of how coding works," says Ben. ►



The drive team ready to compete in their next match on the Newton field in Houston, TX Championships.





◀ “Kids can immediately see the cause and effect of what they do and it creates a connection in their mind between the hardware and the software.”

#### Why robotics?

Today's students have grown up with technology but most of them don't know how their devices work.

It is predicted that the future will increasingly revolve around the digital and computer world making it vital that young people are equipped for the jobs of tomorrow.

Robotics and STEM electronics are considered engaging ways to interest students in subjects that they may otherwise have struggled to see the relevance

or believed to be too hard. Simply put, robotics is fun because it's hands on and can be made even more exciting by setting up competitions, challenges and games where, for example, students' individually programmed robots compete on a driving circuit.

Altronics' Ben Lowe says an alternative to robots is STEM

electronics which are platforms that can be programmed like miniature computers and interfaced with hardware such as motors, sensors, keyboards and mouse.

Ben says platforms such as Raspberry Pi and Arduino are about the size of the palm of your hand used by students use to learn programming.

## Global robotics leader offers STEM solutions for schools

**Taking education “to the next level” is the philosophy of robotics company Makeblock which supplies STEM education products to schools all over the world.**

The company, founded in 2013, sells to more than 140 countries and its products are used in more than 20,000 schools as part of the STEM curriculum.

“Makeblock provides a complete set of teaching materials and teacher training for

school teachers with robotics,” says Founder and CEO Jasen Wang.

“Makeblock's integrated STEM education solutions are perfect for schools, families or any STEM education scenes. Schools can also customize their own solutions in

Makeblock.” The company has won eight internationally recognised design awards for its products which include hardware and software solutions.

#### Makeblock robotics STEM kits include:

- **Codey Rocky:** Smart robot for beginner coding and AI learning
- **Makeblock Neuron:** Programmable electronic building block platform
- **Airblock:** Modular and programmable flying robot
- **mBot:** Entry-level educational robot kits

Makeblock also provides professional maker kits packages and a DIY programmable mechanical building block platform.

The company runs an international robotics competition with rounds in countries like France, Estonia, Singapore, Indonesia, Hong Kong and Mainland China.

Eventually 350 teams will be selected to compete in Shenzhen, China for the MakeX Global Finals with trophies and a prizes totalling \$50,000 this year. ●





"Students can use these boards to connect to motors, wheels, mechanical arms and sensors to build an interactive platform for basic robotic tasks," says Ben.

"There are many commercially available robotics kits using these open source platforms which can be easily programmed by students and teachers."

#### Professional development

Education minister Simon Birmingham's comments about inadequately trained STEM teachers begs the obvious question of who should take the lead in implementing robotics and electronics activities in schools?

Altronics' Ben Lowe says teachers who want to get involved will find plenty of help on the internet and

in the online "communities" that have grown around the various platforms.

"YouTube is actually a really good place to start if you want some self teaching and you can also sign up for training courses," explains Ben.

"Arduino and Raspberry Pi both have huge communities behind them which help to provide users with plenty of support when building and designing."

Ben suggests grounding students with basic fundamentals on how hardware such as switches work before building up to coding and programming. ■

*By Kat Donaghey, Editor*

**makeblock**

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# Cutting edge technology builds student workforce skills

**Laser machines can be used to develop skills in everything from architecture to engineering and jewellery making.**

Preparing students for the future workforce and inspiring a generation of entrepreneurs begins with new classroom learning ideas.

With the ever-changing technological landscape, employers are looking to hire youngsters who may have more knowledge and innovative ideas than their bosses.

One area in which schools are proving to keep up with industry practice, if not exceeding it, is the use of laser technology.

Futuristic-sounding lasers can be used in a practical way in schools for subjects ranging from home economics to the sciences.

Students can design, create and build products and projects from conception to completion through the use of laser machines that can engrave, cut and mark – and the possibilities are vast.

Hundreds of schools across Australia have invested in the technology and are experiencing results – with students graduating into the workforce to devise innovative solutions involving laser.

So what is a laser machine, how can they be employed at school and what should educators know to get started?



*School News Magazine* spoke to laser manufacturer Trotec Laser for information and guidance.

## What is laser technology?

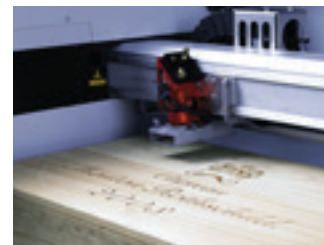
Laser technology can be used for cutting, engraving or marking materials.

**Engraving:** Products created through laser engraving include trophy plates, name badges,

photo engraving, rubber stamps, promotional products, asset management and computer-generated artwork.

"Students these days are more creative using different materials such as paper, cardboard, fabric and acrylic, just to name a few," explains Trotec Laser managing director Reece Moore.

**Cutting:** Laser cutting products



include models, signage, paper cards and acrylic displays.

"Cutting of acrylic can be used in several ways, most commonly for artistic or engineering use. Students are taught to create functional parts with the laser machine, for example cutting components out of acrylic for use in robotics or engineering," says Reece.

**Marking:** Laser marking is used in a number of industries such as the automotive industry, medical industry and food industry. Laser marking is typically used in metals, plastics, paper and leather applications, to name a few.

## What key skills can students develop from using this technology?

Using a laser machine across a range of subjects helps develop skills in everything from architecture to engineering, graphic design, sign writing, jewellery making, arts and craft, fashion and point of sale.

Students learn to create ideas and follow through from the design phase to assembly.

"Students use industry-recognised design programs such as Corel, AutoCad, Adobe Illustrator which allow them to create a project virtually and then produce a physical finished product," says Trotec Laser managing director Reece Moore.

## Global leader in laser supplies to schools

**Since its first laser machine was developed and built in 1996, Trotec Laser has expanded across the world.**

The company develops, manufactures and markets lasers for cutting, engraving and marking and services 90 countries.

"We are the world leader in the field of laser technology," says

managing director Reece Moore.

"As an innovative market leader, we set new standards in laser marking, cutting and engraving."

Schools interested in using the technology will find it is versatile and can be employed in a range of subject areas, from home economics to STEM to create projects.

Trotec provides initial and ongoing guidance to schools,

including professional development and maintenance support.

The laser machines are also used in industry, meaning students will develop skills that can be translated into the workforce.

Trotec products come with up to a 10-year warranty and the company also offers Australia's largest range of materials including laminates, acrylic, woods, paper and more. ●





# **trotec**

*laser. marking cutting engraving*

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# Keeping the school communication lines open

**Despite the reliance on emails and texting for keeping in touch, the traditional phone system is still one of the most important modes of communication for a school.**

A telephone system keeps you in contact with the outside world – parents, students and the community – and also provides vital connections on campus between staff.

Phone systems that incorporate paging are also important to broadcast announcements and alerts such as school lock down alerts and emergency evacuations.

Without a reliable and secure telephone and paging system, contacting people would be difficult, time-consuming and costly and making emergency announcements would be fraught with danger.

Like most modern modes of communication, today's telephone and paging systems offer new levels of functionality that improve the day-to-day communications in a school.

However many schools are still

contending with old technology which will soon become obsolete. With the rollout of Australia's National Broadband Network (NBN) and the phasing out of copper lines, schools are now finding themselves forced to replace old telephone systems that will no longer work. Choosing a new telephone system may seem confusing given the plethora of acronyms, such as VOIP and SIP trunks.

## Industry view

*School News* magazine spoke to industry experts about choosing a phone system to meet the needs of your school.

## School phone systems

A school telephone system connects internal users to one another and also connects the school to the outside world. The capabilities of telephone systems can vary depending on a school's needs but some necessities include a central point to answer inbound calls during school hours and after-hours answering services, call transfers and voicemail.



## A range of basic and advanced features include:

- Converting voicemail to email for individual teachers receive messages from internal and external callers.
- Voice recording
- An auto attendant to answer inbound callers and allow the callers to make their own selection to direct their call internally, reducing the need for every call to be answered by an operator.
- Telephone virtual conference rooms

Auto Telecom Australia national

dealer manager Jim Keegan says schools can opt to install phones in every room or use a combination of paging speakers and phones.

"Every school is different and their communication needs and systems can be tailored to suit," says Jim.

"It's important to be able to contact teachers and telephone system can also be set up so teachers can access their own voicemail from any phone using their own pin, allowing them to be in contact with students, parents and colleagues.

"Schools might opt to have a phone in every classroom or contact the classrooms through the paging system.

◀ "These fundamental skills of conceptualisation, design and creation can be transferred across to all avenues of future employment. "As an example, a teacher might require students to develop a design portfolio from birth of concept to final finished product.

"The student typically starts with sketching which is then transferred to computer graphic drawings which in turn is then produced on a laser in individual components, ready for assembly. "The teacher can grade the student's ability to conceptualise, design and develop. This concept can be used across curriculum."

**What is the advantage of knowing how to use this technology in preparation for the workforce?**

"We know of many examples of where students who have

used Trotec laser machines have recognised a need for this technology in their place of employment," explains Reece.

"We are seeing a trend of students becoming young entrepreneurs, using the laser systems which they used at school to create a business or product. "

## What machines are recommended?

Trotec Laser's Reece Moore explains there are two main types of laser machines – CO<sup>2</sup> and fibre.

CO<sup>2</sup> lasers can cut and engrave the widest range of materials including plastics, wood, paper, fabric, acrylic, rubber and cardboard and can engrave glass, ceramic, stone and coated materials like anodised aluminium. Fibre laser is used for marking and engraving raw metals as well as industrial plastics and allows for metal marking methods

like annealing and engraving. Fibre lasers are typically used to create highly-contrasted markings on metals for example anodised aluminium or colour change stainless steels. The most common type of laser machine in schools is a CO<sup>2</sup> laser or a dual-source laser such as a Speedy Flexx laser machine.

## How popular are laser machines with schools?

Laser machines were first used in commercial industry and has expanded into education and can now be found in schools, TAFE, universities and specialised learning colleges across Australia.

"Laser technology is becoming a preferred option for schools for teaching of rapid prototyping processes as lasers are extremely quick compared to 3D printing for example," says Reece.

## What would you recommend for schools venturing into this technology for the first time?

Trotec Laser managing director Reece Moore advises to do your research and pay special attention to the safety features and support provided by the laser manufacturer or supplier. Schools should also consider safety requirements such as an appropriate extraction system for removing fumes from the laser process. "The machine that the school purchases should have safety interlocks. A laser machine needs to be supervised at all times to prevent mishaps," says Reece.

Also check if your supplier provides ongoing assistance such as lifetime training and machine support, refresher courses, a tech-hotline with phone support and Facetime/Teamviewer assistance. ■

**By Kat Donaghey, Editor**





"To ensure that there is clarity for all announcements, paging speakers can also be installed in corridors and playgrounds. Every school will have its own requirements."

### Switching to NBN

Many schools have had to re-evaluate older telephone systems after being told they will no longer work once they have switched to the NBN.

The NBN involves replacing old copper services with fibre optic cable and many of the older telephone systems may not be compatible with NBN.

Auto Telecom Australia's Jim Keegan suggests seeking advice before throwing out the old telephony as some can be adapted to work by installing VoIP trunk

cards to enable the system to accept NBN signalling.

"When you switch to NBN you may be approached by a telco representative who will tell you your existing phone system is not compatible with NBN but that's not always true," says Jim.

"Before you agree to or sign anything – do some research.

"If you have a VoIP or hybrid system you may be NBN ready.

For schools with old equipment, you should start thinking about moving to new technology, particularly as the cost savings of VoIP trunks alone would be worth the effort."

Jim explains that VoIP (Voice over Internet Protocol) (SIP) is basically a phone service over the internet

rather than traditional phone networks.

PBX or PABX is a private telephone network used within a company or organisation.

"The best way to minimise costs when selecting a new PABX system, is for the school to establish their requirements and then request for quotations based on those needs," he says. "This would enable the school to do a comparison based on these needs, to establish what would be the best solution for them based on the features and price.

"Also connecting up their telephone services to a SIP service provider (VoIP trunks) who can offer them a premium quality service at an affordable price and reduce costs.

### Installation

Installing a new telephone system can be a simple or more involved process depending whether the school is a new or existing site or the age of the cabling.

Any school site can be tailored with the ideal telephone and paging system with the right consultation and planning. Allowing you to meet the day-to day operation needs of your school campus.

"It's important to co-ordinate your installation of your new system, to ensure that your key staff members are available for training at the cutover. This will ensure that you get the most out of your new telephone and paging system," says Jim Keegan. ■

*By Kat Donaghey, Editor*



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# Not just for grandma's fridge: the usefulness of 'picture day'



**It's an annual event that no-one should avoid, no matter how self-conscious or ashamed they are of their current hairstyle.**

For students, it's a rite of passage; for parents, it's a prized record of their child's growth; for teachers, it's a bit of a pain to organise and a bit of a laugh to take the staff pic. But for schools, picture day presents a few unique opportunities.

## Marketing

Marketing is the first thing; a chance to create a visual map of the school, all its groups and sports teams; competitive success stories and musical triumphs. It's also a chance to come up with some glossy new staff headshots for the school publication, and any number of prospective-friendly happy snaps to showcase a school's culture and range of activities.

## Fundraising

Fundraising is another opportunity posed by picture day that's, perhaps, too often overlooked. One option is for schools to arrange to have photos taken that can then be used as part of a fundraising campaign. For instance, if the senior drama class will be performing a theatre production at the end of the year, they could take the opportunity to take 'headshots' or cast photos to then use on t-shirts or as merch to sell to family and friends. Similarly, sports teams and school bands could pose for group photos to use on flyers or posters, press releases, social media posts, etc. Having polished, professional photos can make a big difference in reaching a wider audience.

Another fundraising option is to make a commission on

## The day before

Remind students that photo day is tomorrow, and explain how they can best present themselves. In schools without a uniform, some classes agree on a class colour or style; jeans and white t-shirts for example. Schools with uniforms should remind students to have the correct attire. Encourage students to wash their hair the night before so it will be clean and shiny for their photos. They may like to take a hairbrush for a last-minute groom before the shoot. If your school has a strict dress code, refresh the memories of your students and parents with a note or email.



photo sales. Different school photographers will have different rates and offers that schools can weigh up but, depending on the size of your school, this could add up quite considerably. Ask your photographer for terms; photo day fundraising could buy a lot of books for the school library. Some companies offer parents the option to order images on a wide range of products like diary covers, key rings, mouse mats and coffee mugs.

Professionalism. In this age of digital wizardry, there is no excuse for poor quality images. School photographers typically take a series of shots of each grouping then scrutinise the results for the best image, using technology to swap heads between images if need be. It is fairly standard now for suppliers to also offer digital versions of all photos, whether they charge extra or provide as a complimentary bonus to the hard copies.

## On the day

Check that students are clean and neat *before* they leave the classroom. Encourage them to look at one another to make sure clothing is buttoned properly and faces are free of food smudges. Let the photographer run the show. School photographers have worked with thousands of children and are experts in eliciting the best expressions.



## Aesthetic

While the full-scale, movie star photoshop is somewhat out of the question for hundreds of pupils, you can expect a light retouch of all final shots, such as a clean-up of runny noses, dirt marks on tops, and elimination of unwanted items in the background. Something to ask the photography company about is whether they allow parents to see a version of the photos before buying – in many cases this is standard but for others it's not part of the process, or they may leave that decision to the school.

Increasingly, photographers are offering a range of styles for class, team and individual portraits. Schools can select a style that is in keeping with their culture whether traditional or contemporary. Some schools are asking for more casual posing with children sitting on the floor, under a tree or draped around the playground. Others want silly, playful or creative shots, while some schools prefer black and white. For yearbook photos, there may be a theme that can be catered to.

Photographers report that parents want more than just individual portraits of their children, which is good news for schools eager to sell as many photos as possible. Parents often want sibling shots, photos of friendship groups and all different genres of 'team photos.'

## Geography

Innovative learning space groupings are a challenge for photographers; it's a lot of people to get into one shot.

Some suppliers have changed their approach to ease the process and offer the option to photograph students individually then digitally



## The ordering process

Today's parents don't want to be bothered with paperwork, they expect to be able to view and order images online, and they also expect to be able to buy digital files. This is hugely beneficial in reducing the administrative work for school staff, making photo day an altogether more enjoyable occasion.

**ORDER NOW**

create a class photo. In this way, each student's face is clear, eyes unblinking, and the group is evenly spaced. It also means that students who are absent on photo day do not have to miss out as they can arrange a makeup session with the photographer.

If schools prefer a 'real-time' group photo, where the whole school is lined up on tall benches, as many of us will remember posing for in our youth – this is something run by suppliers in the initial planning stage.

## Planning

Ask your supplier to do a site visit before the event so they can be clear about space, layout and best venue according to the lighting.

Create a photo day timetable so everyone knows when and where they're expected. Discuss how many photographers and/or set dressers will be coming along, and what spaces will be utilised.

Clear communication is paramount – between the photographer and the school, and between the school and the parents. Find out what sort of preparations will be required; will the photographers need before-hours access or to have the school hall cleared? What about contingency for a rainy day? Check too what happens if a parent is not happy with the product, is there a money-back guarantee? ■

*By Rosie Clarke,  
Industry Reporter*

## Top quality images stand the test of time

**School photos are cherished by students and families which is why photographer Mark Curran stresses the importance of quality, affordability and excellence.**

Leading Image School Photos was founded to provide the highest quality product at a price families can afford.

The Australian company uses only the best quality camera equipment, photo paper and printers to ensure school mementos last for years and years.

"We print on the highest quality paper product but we also make sure the prices are affordable, even if that means adjusting other areas of our business," says Mark.

"We provide the best quality, best value and we also pride ourselves on our level of service.

"We build relationships with schools, they can call on us for absolutely anything they need and they feel they can trust us and rely on us."



Leading Image School Photos has branches in Geelong, Sydney, Tasmania and the Gold Coast. ●



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# Research reveals classroom seating can impact the learning experience

## Can classroom seating make a positive difference to student learning?

The satisfaction of a good seat can make a pleasurable difference when watching TV, lounging with friends or typing a report at work.

But can the humble chair also impact the learning mindset of students who are often forced to spend hours and hours sitting on dated furniture?

Will a trendy stool improve a child's grades? Will a colourful beanbag inspire greater engagement or will a yoga mat on the floor help foster a classroom community?

If current trends are anything to go by, there is a growing school of thought that chucking out old desks and chairs in favour of modern designs can help connect students to their learning.

More teachers are experimenting with an array of seating styles – from ball chairs to wobble seats, bucket chairs, floor cushions and crates – that can transform the visual appeal of classrooms from staid to innovative.

But are these design changes superficial – only altering the mood of a room – or can a comfortable or ergonomically designed seat actually make a difference to a student's report card?



Image: Resource Furniture

## Classroom seating trends

The traditional classroom – with rows of front-facing desks and a teacher standing at the front of the room and talking at students – remains the predominant style of education in Australia.

Emerging research from the *Innovative Learning Environments and Teacher Change* project led by the University of Melbourne reveals that 75 percent of Australian classrooms continue this 'old school' trend.

But a growing number of teachers and schools – about a quarter

of Australian classrooms – are experimenting not only with classroom layout but the types of furniture and seating available to students.

Much as "individualised learning" is an increasingly popular concept in education theory, more teachers are extending that notion to the idea that students may also benefit from personalised seating.

The concept has been dubbed "flexible seating" and at its extreme imagines a utopian classroom in which every student's seating requirement is catered to.

Traditional furniture is replaced with vibrant variety – with low, medium and tall seating to suit students of different sizes.

Some students may rise above the class on stools, others crouch on the floor in meditation-style cushions while others sit on cubes or boxes at traditional table height.

Rows of desks may be rearranged to enable students to work collaboratively in groups, pairs or alone or to sit or lie on the floor.

Seats that can be rocked or swivelled are offered to fidgety students to help burn energy



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Image: Resource Furniture

and improve concentration. Just as libraries are undergoing major makeovers to turn tired spaces into popular social hubs, classrooms are being given a touch of renovation magic – with new colours, styles and innovations – in the hope of increasing student engagement.

Advocates of flexible seating espouse a philosophy in which the “teacher-centred” classroom is replaced with one that is student focussed.

Teachers such as online blogger Kayla Delzer, who has posted photos of her classroom transformation, claim the benefits of flexible seating include increased motivation and engagement, creating a better oxygen flow to the brain, and improving core strength and overall posture.

However the changing-rooms trend has sparked warnings not to get swept up in classroom “decorating” to the detriment of functionality. ►



Image: Interseat

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Image: Camatic Seating

## ◀ Better seating, deeper learning

Associate Professor Wesley Imms, director of Learning Environments Applied Research Network at the University of Melbourne, says Australia is leading the world in undertaking new research on innovative learning environments and its links to quality teaching.

However he says there is currently no empirical evidence to suggest seating specifically can have a positive effect on educational outcomes.

Some earlier studies have made loose associations between the type of furniture in the classroom and the potential impact on students.

In Australia, the Department of Education Training and Youth Affairs' 2001 report *'Building Better Outcomes: Impact of School Infrastructure on Student Outcomes and Behaviour'* listed furniture as a "cosmetic factor influencing learning".

Although seating was not singled out, the report highlighted a

UNESCO project that noted uncomfortable and unsuitable furniture as a cause of problems such as backaches and difficulty writing that could impede learning.

Another study published in the *Journal of School Leadership* in 2010 said students had underscored furniture as a "hindrance to their learning" and in many instances they did not like being confined to the desk-chair combination.

Professor Imm says there is definitely a trend towards experimental seating as part of the broader transformation of classrooms into "innovative learning environments" but the challenge now is to prove if the changes are positively impacting student outcomes.

"We have buckets of anecdotal examples where schools have brought new furniture into an innovative learning environment and they feel as though the students are doing very well," he says.

Associate Professor Imm says the introduction of flexible seating

is in most cases inspired by, and goes hand-in-hand with, a change in pedagogy away from "didactic" teacher-centred learning towards "student-centred" teaching which enables deeper learning.

However leading University of Melbourne researcher, Associate Professor Terry Byers says there are many "claims being made" about the need to upgrade seating types and schools have been spending "a lot of money" on furniture that may not live up to expectation.

"Seating is just one variable in the mix," Prof Byers says. "Really it's more about what you do with the furniture than the furniture itself.

"It's what teachers are doing in the classroom and what students are doing that is more important than the furniture. Furniture can be a vehicle to facilitate that."

## Tiered, retractable, wider school options

There are many areas outside the classroom that require seating, particularly auditoriums or halls that are multi-use.

On any given day, a school hall may be used as a cafeteria, a sports stadium, an assembly hall, a lecture room, or even to house an after-school-care program. So seating flexibility is a must.

Retractable seating is one option for schools: these seats can be fixed or mobile, have wall mounts, foldaway storage options, and some can also be motorised and controlled from an external panel.

Benches and stackable plastic chairs are other alternatives, with cushions or padding also available.

For younger children, scaled down seating can save space in common areas and ensure that no-one is sitting on the floor during assembly.

Tiered seating is also important to aid visibility. Depending on the space available, a custom tiered option may be ideal.

In echoing auditoriums, well-lit aisles built from noise dampening materials can be a huge time and voice-saver for teachers and guest speakers. ■

By Kat Donaghey, Editor



## Improving classroom productivity with comfortable seating solution



**A key to a positive learning experience starts with comfortable lecture hall chairs, according to Camatic Seating.**

An Australian company based in Melbourne, Camatic is the nation's largest designer and manufacturer of education seating, recognised for its quality, innovation and customer service.

"For more than 50 years Camatic has delivered best quality seating products and innovative solutions for primary schools, high schools and universities," says CEO David Fisher.

"From the hallowed halls of learning at prestigious universities to the most modern of conference centres, Camatic Seating has always believed that for the mind to be active, the body must first be comfortable."

Camatic advises that school



seats must be long-lasting, providing many years of comfort to students. However, durability does not mean compromising on aesthetics and design which is why the company offers several colours, dimensions and styles.

"Well-made and comfortable classroom seating makes a big difference to a classroom's overall productivity," says Camatic.

"Our seats are designed to be functional, versatile and stylish can be custom made to suit the school's requirements." ●



## Sitting down to a better education


**Today's classrooms are innovative learning environments and that means having versatile furniture to match.**

As schools swap out traditional chairs in favour of contemporary seating, they will find an array of choice at Resource Furniture.

Resource Furniture senior product designer Michael Merlino says students love the flexible designs that can be arranged to provide individual focus or collaborative group work to enhance the learning experience. "Multi-functional seating is definitely making it more fun as classrooms move away from traditional desks and chairs," he says.

Resource Furniture's most popular lines from more than dozens of designs include:

- **Bend Soft Seating:** single ottomans that can be arranged in curves and irregular shapes and fitted with tables.
- **Longo Pod:** re-arrangeable sofa-style pods, with a back rest, that sit two, four or six.
- **Breva & Zara:** Cosy booth soft seating with in-built power.
- **Wing chair:** Award-winning take on the traditional chair.
- **Fuse Ottoman:** A single ottoman that can rock 360 degrees on its base.
- **Spacio:** A compact chair that provides, strength, flexibility and ergonomics. ●




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# Culture, history and nature collide in the educational NT

The Northern Territory is more than just a feast for the eyes, with many of its most popular tourism destinations also providing memorable education opportunities for schools.

The Northern Territory is more than just a feast for the eyes, with many of its most popular tourism destinations also providing memorable education opportunities for schools.

In the last four years, the number of interstate school excursions to the NT has increased 20 percent following the launch of a Learning Adventures tourism campaign to attract more schools.

From Uluru to Darwin, Australia's red heartland has tailored education experiences at its iconic locations to align with the Australian curriculum - in particular sustainability, Aboriginal and Torres Strait Islander histories and culture, and Asia and Australia's engagement with Asia - making it easier for teachers and educators to choose a destination.

Geology is another area in which the Northern Territory shines, with students learning about the ancient rock formations and incredible landscapes located at some of the most stunning natural sights such as Uluru-Kata Tjuta National Park.

NT Learning Adventures falls under the umbrella of Tourism NT and provides teachers with a one-stop shop from which to plan their school excursion.

With everything on offer from



Students from Trinity College explore the Northern Territory.

dedicated education tours and accommodation to a variety of suggested itineraries traversing one end of the territory to another, schools are spoilt for choice.

Tourism providers involved in NT Learning Adventures are well versed in the requirements of a school excursion offering educational resources, risk assessments and operational policies and procedures.

## Travelling to the NT

Most schools exploring the NT are from Victoria, NSW and South Australia and tend to visit during the June-July school holidays which is also the NT's peak tourism season.

The popular destination of Uluru often welcomes as many as 3000 students during that peak holiday

period before the next wave of school visitors in the September-October holidays.

However tourism authorities would like to encourage school groups to visit outside of the holiday periods.

The most common mode of transport is for excursion groups to jump on a bus in their home state and drive the vast distances to the Red Centre before either flying or busing home.

NT Learning Adventures offers a range of suggested itineraries with costings to help plan your journey, ranging from seven to 13 days.

As an example the 12-day Northern Territory Safari (from \$1660 per student) takes students through the desert to the mining town of Coober Pedy where people live underground.

Days two and three are spent camping at Uluru-Kata Tjuta before heading to Alice Springs where a number of tourism operators offer tailored education experiences.

From Alice Springs students hit the road and stop at the Devil's Marbles before setting up overnight camp at Daly Waters and taking the journey to Nitmiluk National Park and then Kakadu National Park.

After two nights camp in Kakadu it's time to hit the road again, heading to the capital Darwin for the Museum and Art Gallery of the NT and a chance to watch a movie before flying home.

Along the way there are plenty of experiences to choose from, however Tourism NT has selected five that you may want to seriously consider for your school trip.

- **Karrke Aboriginal Cultural Experience:** Students will be immersed in Aboriginal culture in this hands-on experience that covers everything from dot painting, to grinding seeds for food and making clap sticks. Located near the tiny Wanmarra community in Kings Canyon National Park, Karrke is owned and operated by Christine Breden and Peter Abbott to preserve their Luritja and Pertame (Southern Arrente) knowledge and heritage.
- **Earth Sanctuary World Nature Centre:** Sustainability is the focus of this family



Students get hands-on interaction with station animals and learn about the care and welfare of animals at Katherine Outback Experience.



Sustainability is the focus of Earth Sanctuary, a family owned education tourism experience in Alice Springs.



owned education tourism experience in Alice Springs where students can go on astrology tours, sleep under the stars and see sustainability in action. The Earth's Cool education program focuses on energy, water, shelter, food, utilities and wellbeing to broaden awareness on sustainability.

- **RFDS Darwin Tourist Facility:** Students learn the story of the RFDS which began aero medical operations in the NT in 1939. The Bombing of Darwin virtual reality exhibit uses gamer-level graphics to provide an immersive educational experience where students will learn what happened that destructive day when the Japanese fighters that attacked Pearl Harbour turned

their attention to Australia. Stories are told through ghost hologram and 3D technology.

- **Katherine Outback Experience:** Aligned with the Australian curriculum, students get hands-on interaction with station animals and learn about the care and welfare of animals, as well as outback singing and song writing, education on the cattle industry and the challenges of living remotely.
- National parks including Watarrka, West MacDonnell, Judbarra and Litchfield National Park. Most parks offer some kind of educational experience or ranger activities focussed around education with private school camp grounds. ■

By Kat Donaghey, Editor

## Education tourism plan boosts visits to NT

**A key objective of Tourism NT is to increase education visits to the Northern Territory.**

The peak tourism body launched its *School Education Activation Plan* four years ago, working with operators and key stakeholders to position the NT as Australia's preferred education tourism destination.

The result has been a significant increase in school visitors to the NT, including a 20 percent jump in students travelling to the NT over the past two years.

The NT is now the third most popular destination for school trips after Canberra and overseas destinations.



"Our plan is to increase further and focus on providing more capacity and more experiences," says Tony Quarmby, Tourism NT general manager of marketing.

"The NT provides an authentic experience and there is so much personal development as well as the history, culture and geology."

Tourism NT also offers a \$1000 Save and Learn grant that can go towards the cost of an excursion. ●

# SAVE & LEARN IN THE NT

Tourism NT understands that cost is a major factor when planning an excursion for your students. So Tourism NT have put together the Northern Territory School Excursion Program for which schools can receive up to \$1000 to go towards their school trip to the NT. Simply apply online to Save and Learn!

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## supplier profile

## SHERPA KIDS AUSTRALIA

## Ensuring quality care

**With schools constantly on the lookout for more services offering quality experiences for students, more and more are choosing to outsource their outside of school hours care requirements to external providers, writes Michael Rasmussen, General Manager at Sherpa Kids Australia.**



**Outside of school hours care (OSHC) services have come a long way – from volunteer-based models to P&C committee-led models to the more regulated model we currently see in most schools today.**

One of the main roles of the Australian Children's Education & Care Quality Authority (ACECQA) is to "support the children's education and care sector to improve quality outcomes for children". The way this is reported is through ratings and assessment outcomes based on the National Quality Standards (NQS). Having a thorough understanding of the results is important in guiding decisions about what equates to a quality service.

There is currently a revised set of 40 elements that services are rated on, with the overall rating reflecting the lowest rating given for a standard. What this means is, if for example you receive a 'meeting' rating for one standard and 'working towards' for another, the overall rating is the lower of these, not the average. ACECQA's thought process behind this is about ensuring all services are working above and beyond to provide quality care.

However, as a school, what defines 'quality' when looking at an OSHC service? Happy and engaged children, happy parents and families, a variety of rich experiences for children, consistency in staff at the service, qualifications and experience of staff, and engagement between the service and the school all form part of the NQS assessment.

Just like in the classroom, a child who is engaged in their OSHC learning will take something away from that experience and connect it to their world. When children enjoy coming because of the experiences, it shows the service is connected with the children in its care and creates programs directly out of their interests. This equates to a quality program offering quality experiences.

Happy parents generally exist when their children are happy too and they know they are in an engaging, friendly and safe environment. However, they are also happy when the service experience is uncomplicated as far as costs and administration goes. The service needs to be personable, approachable and understanding.

A quality service has staff that bring their own talents to life through the

program; who have a passion for sport, dance, craft, cooking, science, music, to name a few, to ensure experiences are rich and rewarding.

Staffing is also critical. Services that churn staff regularly are generally those with inconsistent and unconnected programs; behaviour issues with children; reduced rapport with children, parents and the school; and too much time away from the important aspects of spending quality time with children. The level of experience and qualifications among staff ensures what is planned and delivered is of the highest standard.

The best services involve genuine relationships with schools, where schools identify the service as their own, even when it is delivered by an external provider. A quality service builds rapport with all staff at the school and buys into the school's culture and ethos. These are the types of services that have better programs, are better resourced, have less behavioural issues, and ultimately ensure more quality time for the children in their care. ▲

### Author profile

**Michael Rasmussen** is General Manager at Sherpa Kids Australia. He has been a franchisee with Sherpa Kids since 2014, and has owned and operated two successful services in Sydney. He progressed to the state Master Franchisee for Victoria, growing the state in terms of schools and franchisees.

Prior to this, Michael worked as a teacher at St Paul's Catholic Primary School in Camden, NSW. He was also responsible for managing the school's sport portfolio, working closely with the principal and school executive team.

Michael has previous business and management experience, managing several small businesses, including one of his own. He was also a Police Officer in the NSW Police Force for a number of years where he developed skills in people management, leadership, problem solving and high level communication and negotiation skills.





# Looking for a solution to your OOSH/OSHC challenges?

Australian families are desperate for good quality, affordable day care or outside school hours care



**These days both parents are likely to be employed and working longer hours than ever. This, combined with transport issues, can make the issue of after school clubs or after school care a stressful one for parents and children alike.**

## **AND IT'S BECOMING A MAJOR ISSUE IN EARLY CHILDHOOD EDUCATION.**

Volunteer-managed OOSH or OSHC committees are struggling with the issue of out of school care in the face of new regulatory reforms that increase quality expectations but also increase administrative burdens. Senior educators like you are looking for a better way and OOSH service providers are frequently an attractive option.

You'll be well aware of the difference it makes to you and your school community when you have high quality, well managed outside school hours care on your site. At Sherpa Kids we deliver exactly that - but with a difference that other after school care and OOSH service providers cannot match. Because our business is built on the local franchise model you get the best of both worlds; the care and concern of a local decision maker based in your community, combined with the confidence and authority of stable, professional central management.

**Firstly, your service is owned and managed by a carefully selected local community member;** usually a mum or dad and, in some cases, an education professional.

They understand families, they understand schools, and they want to mirror your school's values in their before and after school care services and vacation care.

The Out of School Hours (OOSH) care sector is intensely regulated. So, it's important that procedures are followed correctly. When you partner with us we will take care of your OOSH services set-up in full. We'll manage all your administration, recruitment, training, staff rota, parent communication and compliance obligations.

And we'll buy all food and resources locally from retailers in your area.

**Secondly, the franchisees are all part of a highly professional group with centralised resources geared to ensuring State and Federal regulatory compliance and enabling development of engaging programs for the children we care for.** We've developed a fun and flexible, engaging programme of before and after school activities that is syllabus-led and can be tailored to fit the individual requirements of schools and their curriculums.

**Fun, flexible and engaging OOSH/OSHC programmes that are syllabus-led.**

**Sherpa Kids Australia are currently working with local schools in Sydney, Adelaide and Canberra areas. Sherpa Kids presents your school with the opportunity to make real a difference for your local community by providing out of school care. Please contact the team at Sherpa Kids to find out more.**

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# Water's not optional, but its packaging is up to you

**Worst case scenario; they're drinking unfiltered tap water that leaves them with a bad taste in their mouth and, in the case of children, doesn't encourage them to properly hydrate.**

Young people live in a world where it is often cheaper to purchase a syrupy frozen drink from a convenience store than a bottle of water. So if schools want to promote the hydrating and healthy benefits of water, it needs to be a conscious effort.

Cost aside, if a child wants to fill up their water bottle from the school bubbler or tap, how does it taste? Metallic, warm water is going to be off-putting to most people and the last thing a school should want is its students trying *not* to drink the on-site water. Hydration is absolutely critical to optimise learning and performance. ►

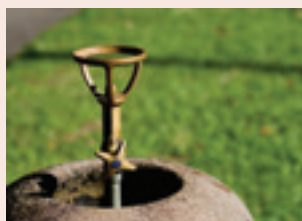


## Keeping students hydrated for 50 years

**You may never have heard of a Type 45 Upright Bubbler but chances are you have drunk from one.**

The robust drinking tap designed by plumbing manufacturer Enware Australia some 50 years ago is a popular item in most Aussie schools and public spaces.

The company still makes the reliable bubbler today along with a range of other tapware products designed specifically for the school environment.



Enware research and design manager Jason Hinds is also excited to release a new bubbler model this spring that was co-developed with students and designed around their feedback on how to

improve hydration at school. "The new Blueline Pro bubbler incorporates a bottle fill valve. We want kids to have easy access to drinking water, be better hydrated, alert and concentrating in class and keeping drink bottles filled with fresh water is a great way to achieve this," says Jason.

Enware is an 80-year-old company with a philosophy of designing products that enhance the wellbeing of users.

They aim to provide the best mode of hydration for students to ensure a positive effect on their studies.

"All our products are designed here in Sydney and we supply right across Australia," says Jason. ●





## bringing back the bubbler

Do you remember playing at school and not wanting to miss a moment of the action, a quick drink from the bubbler was what we did, and what kids have been doing with Enware bubblers for 80 years.

At school or at play, drinking water and staying hydrated is important for optimal physical and mental function.

Enware is excited to release a new bubbler range, the **Enware Blueline Pro**, designed to provide easy access to **clean, fresh drinking water** for all children throughout the day. Featuring a dual action **bubbler** and **bottle filler** with the lightest and easiest to use handles.

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mouthpiece to  
protect teeth



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bright push down  
lever easy to use  
for kids of all ages



quick fill  
bottle filler



## If schools want to promote the hydrating and healthy benefits of water, it needs to be a conscious effort

◀ A study conducted by Ghetti, S. et al. tested the hypothesis that “changes in hydration status throughout the day may affect cognitive performance with implications for learning success in the classroom.” The study was published in academic journal, *Appetite*, in an article titled ‘Hydration status moderates the effects of drinking water on children’s cognitive performance.’

The study involved 52 children aged between nine and 12 years, and tested the following hypothesis: ‘does the benefit of drinking water on working memory and attention depends upon children’s hydration status throughout the day?’ It seems that it does. The results suggested that “focusing on adequate hydration over time may be key for cognitive enhancement.” The study also found that “changes in hydration status throughout the day may affect cognitive performance.”

While the study was conducted with children, the implications are clear for the entire school community. Adequate hydration

is vital to ensure students and teachers give their brains the best chance of succeeding at the important work of teaching and learning, and the best way to hydrate is with water.

### What are some of the drinking water options available?

The simplest form of water to take care of in any workplace environment is boiling: you need to make sure your teachers, staff, and, in some cases, older high school students can make themselves hot drinks. A decent kettle and safe in-room space to boil and pour should suffice, although there are more technologically advanced staffroom options out there such as combined hot and cold water fountains.

Ambient water is best served filtered, and this too can come in a variety of forms. In a main lobby, for example, where prospective parents and visitors will be arriving you can set some attractive jugs or

beakers next to stacks of reusable cups on the reception desk or near a seating area. This too is a good option for the school sick bay and/or cafeteria to encourage hydration amongst the student body. On that note, make sure that fresh water is accessible between break and lunch times.

Bubblers and water fountains are terrific public area solutions because they provide filtered water access to all students, visitors and staff. Classroom or on-campus bubblers can easily be stocked with water filters and even coolers if they are located outdoors and summer is looming.

While bubblers and water fountains are dotted over most school grounds, but teachers don’t always have time to seek them out, nor the desire to bend at the waist to take a drink amidst a robust game of ‘tiggy.’

### Is plastic okay?

Bottled water requires a responsible approach, against the backdrop of the worldwide push

against its use, while cities and institutions are banning the sale of bottle water outright, with mixed success.

A research paper titled ‘The Unintended Consequences of Changes in Beverage Options,’ published in the *American Journal of Public Health* found a total ban at The University of Vermont actually *increased* the number of bottles being thrown out. People just drank more sugary beverages – and consumers tend to reuse water bottles, but discard soft drink bottles.

Perhaps this means focussing on the bottle itself is advised. What is going to happen to those bottles after use, and what sort of care is being taken in their production?

Making sure you have an effective recycling system inside your school is essential to minimise your carbon footprint. Remember that not all students will prioritise recycling, so it’s part of your job as principals and teachers to educate your pupils as best you can on the importance of recycling etiquette – which is something many schools have taken on as part of their curriculum.

Many plastic containers are now available BPA-free. BPA stands for bisphenol A, which is a chemical that has been used in the industrial production of plastics and resins since the 1960s, and can leach into food or beverages from containers. Open a conversation within your school community to find out about the BPA content of their water bottles. While glass bottles and even cardboard cartons are some of the many alternatives out there, they aren’t always the most practical for a school setting.

The best bet is to open a discussion within your school community to find out what the prevailing consensus is, and talk to a range of suppliers about the different products on offer in your area and how they can best match the ethos of your school. ■

**By Rosie Clarke,**  
Industry Reporter





# It's no secret that teaching is thirsty work

**"The BIBO Water Bar is proving a popular choice in schools.," shared BIBO Water Australia CEO Peter Molloy when asked to describe the company's school-friendly water products and services.**

He explained that this is "due to its low cost compared to under sink boiler/chiller systems; its versatility, in that it can be located just about anywhere so long as there is a power point and water supply somewhere in the vicinity; and the convenience it offers to hard working time-poor teaching staff who want a refreshment on the run."

Noting that "it would also be suitable for senior students in common rooms", Mr Molloy

...Dehydration, even at low levels, can really impair performance and concentration...

emphasised that the BIBO Water Bar was designed for teachers in staff rooms, school offices, and break out areas.

"Dehydration, even at low levels, can really impair performance and concentration. So, the key to avoiding this is to have convenient sources of filtered water in the right locations, where people can rehydrate easily." ●



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# School principal puts first aid skills into action in remote community



Sarah Rowe relied on her first aid training skills as a teaching-principal in a remote school.

**As a school principal on a remote island in the Gulf of Carpentaria, Sarah Rowe was more than just a teacher.**

Locals queried her for banking help, she did the cleaning and when someone had a sudden bad turn of health, she was called on to provide the first aid response.

Although first aid and CPR training is not compulsory for teachers in the Northern Territory, Sarah believes it is invaluable, especially in remote communities.

Sarah was a teaching-principal for two years at Milyakburra School on Bickerton Island, a remote Aboriginal community near Groote Eylandt.

The tiny school usually has up to 15 students from an island population of between 80 and 100 people.

"The island had a clinic but has no nurses and hospital staff living there," says Sarah.



**The skills that were learnt and refreshed during the training were later put into practice to treat a jellyfish sting to adult staff during a school excursion to the beach**

"They would visit about once a week from Groote Eylandt but the rest of the time there was no medical staff and that's why it was important to do first aid."

Sarah, the classroom teacher and two assistant teachers from the Indigenous community took the initiative to complete a two-day first aid and CPR course provided by Red Cross.

The skills that were learnt and refreshed during the training were later put into practice to treat a jellyfish sting to adult staff during a school excursion to the beach.

On two occasions Sarah was also approached by Indigenous locals

when a resident adult suffered a sudden health issue.

"On one occasion I was still working on emails and administration when people came up to the school and said 'We need you' and I was taken to the home of a community member," says Sarah.

"I didn't know it at the time but the patient had suffered a stroke. I performed CPR until the family asked me to stop.

"Another time over the holidays someone collapsed from a heart attack and they came to my place because they knew I had done first aid," she says.

"Again I performed CPR with the help of a parent until the CareFlight helicopter arrived."

Sarah encourages all schools to consider the value of first aid training for teachers and staff, saying it is a potentially lifesaving skill that could be called upon at any time.

"You might not be teaching in a remote community but you never know when first aid or CPR might be needed," she says.

"When I had to perform CPR I knew what I needed to do and I just did it." ■

**By Kat Donaghey, Editor**



Red Cross is the world's leading first aid training provider and has been providing first aid training in Australia for over 100 years.

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IS YOUR FIRST AID  
KIT UP TO DATE?

# How well equipped are you to respond to a medical emergency?

**Parents expect children to be safe at school and that requires the provision of first aid.**

The potential for accidents and injuries at school makes First Aid training for teachers – and potentially students – all the more important.

With hundreds of children circulating in a busy school setting – playing sport, undertaking activities like cooking and manual arts or going on excursions – the likelihood of someone getting hurt is above average.

Slips, trips, tumbles and wrestles can be daily occurrences. Injuries like fractures, wounds or illnesses such as allergies and asthma are also increasingly common childhood ailments with sometimes life-threatening consequences.

Like all workplaces in Australia, schools have a duty of care towards employees and students to ensure First Aid is available.

But increasingly schools are also providing first aid training to students which not only boosts the number of people in the school setting with the ability to respond to an emergency situation but also sets up young people for the future

When it comes to the school work environment, Safe Work Australia provides an umbrella national framework setting out an employer's responsibilities.

SWA's *Model Work Health and Safety Regulations* require that

workplaces ensure the provision of first aid equipment such as kits and tools and that each worker has access to the medical equipment.

Workplaces must ensure an adequate number of staff are trained to administer first aid and that all employees have access to an adequate number of trained personnel.

Safe Work Australia's First Aid in the Workplace Code also recommends first aiders refresh their skills and renew their competency by undertaking full first aid training every three years and CPR refreshers annually (The Australian Resuscitation Council recommends CPR training each year).

Beyond these umbrella national requirements and recommendations, however, each state and territory sets out its own specific regulations outlining the level of First Aid training in schools including:

- **Victoria:** Schools must provide first aid facilities and ensure sufficient staff are trained in first aid. Schools must ensure there is always a first aid officer who can assist an injured or ill person and has current qualifications covering all the school's first aid requirements. Principals must ensure relevant staff receive additional training to meet student health needs.
- **South Australia:** Teachers starting employment in a



The basic Red Cross one-day course known as 002 provides the minimum level of training such as dealing with asthma and severe allergic reaction, CPR and bleeding.

Department for Education site must have an approved first aid certificate. Principals or preschool directors must ensure that staff are adequately trained to meet their site's health and safety requirements.

- **Queensland:** Appropriate facilities and trained personnel are required to ensure that effective first aid can be rendered in a timely manner during all workplace activities including routine activities (eg normal work day, classrooms, office, play and recreation); sporting activities on campus and at other locations; off-site activities (eg excursions and camps); other activities hosted (eg expos, concerts, fetes, dances)
- **New South Wales:** Staff who have been appointed to first aid positions must undertake approved and accredited courses every three years.
- **Western Australia:** Principals and line managers are responsible for the provision of first aid in the workplace,

conducting a risk assessment, developing a first aid plan and ensuring a suitable number of staff is trained.

With so many private first aid training providers across Australia, many of the education departments in each state have developed their own lists of approved courses.

The basic course one-day course known as 002 provides the minimum level of training such as dealing with asthma and severe allergic reaction, CPR and bleeding.

The full *First Aid* course which covers all the important medical emergencies including CPR, bites, stings and wounds is 003.

## Industry opinion

*Red Cross senior trainer and assessor for Qld and NT, Janie McCullagh, said the best case scenario would be for every teacher in every school to undergo first aid training – adopting the South Australia model.*

"At the moment it is a school by school choice; some schools do the basic and others take it to the next level," says Janie.



The full Red Cross First Aid course which covers all the important medical emergencies including CPR, bites, stings and wounds is 003.



"I think all teachers need first aid training. You have one teacher in a classroom of maybe 30 students and what happens if you don't have good knowledge of what to do?"

"Students now have a high rate of asthma and allergic reaction and young children are also more prone to accidents so for that reason you want somebody to have good training in order to ensure the best outcome for the students."

"If all teachers are well trained they should be in the best position to ensure a good outcome if something happens."

However first aid training costs money which is one of the reasons schools may not be able to invest too heavily when they have other competing demands on the budget.

Janie says governments should

step in to ensure the safety of students and staff.

"Governments have got a duty of care to provide funding so that teachers can upskill teachers," she says.

"We really should have some type of government funding to ensure first aid is provided to all teachers so schools can provide the best quality care."

Janie says there is also a benefit to students undertaking first aid training, especially in high school, and says again some schools are more proactive than others.

"If I was a principal I would be identifying those students who would require or benefit from first aid and provide them with the skills before leaving school." ■

**By Kat Donaghey, Editor**

## Protect student wellbeing with first aid products

**Having the right first aid products at hand in the event of an emergency is vital when it comes to protecting the wellbeing of students.**

Seton has an extensive range of first aid products suitable for a school environment to ensure schools are properly equipped to deal with accident and injuries – from the playground to the classroom.

Some of Seton's products include fixed and portable first aid kits, reusable hot and cold packs, stretchers and defibrillators, first aid and safety signs and many other essential products.

As well as minimizing risk, schools are encouraged to comply with the *First*



*Aid in the Workplace Code of Practice* which is also a practical guide to achieving the standard of health and safety and welfare required under the *WHS Act* and the *Work Health and Safety Regulations*.

"Good knowledge of first aid promotes a safer school environment that could potentially save a life," says Brady Australia managing director Terry O'Neil. ●

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# Top-of-the-line school gym helps students activate body, mind and soul



No expense has been spared with the new gym at St Philip's Christian College, NSW. Students participate in two compulsory fitness sessions each week.

**St Philip's Christian College principal Darren Cox is a firm believer that "Fitness grows brain cells".**

So he spared no expense when building a new gym for the school comparable to any private facility and complete with the latest "smart" exercise equipment and multimedia entertainment.

"When it came to equipping the gym with exercise equipment it was important that everything was absolutely top of the line," says Darren.

"Getting the best range says to the students 'We love you, we value you and we want you to do the best you can in this space.'"

Since the bright and colourfully decorated gym opened more than a month ago, students have enthusiastically taken to the new facility.

A full-time gym instructor (who is a qualified teacher) is employed and a second gym instructor will come on board next year.

Students from Grades 5 to 10



**Getting the best range says to the students 'We love you, we value you and we want you to do the best you can in this space'**

are required to take part in two 50-minute gym classes each week which will increase to three weekly classes next year.

"I'm surprised how quickly it has taken off," says Darren.

"It has changed the culture of the school already. The kids say they are sleeping better, they're more alert and we have a group of Year 9 boys who haven't been in trouble for a month because they've been at the gym."

St Philip's sits on 103 acres in Cessnock, in NSW's Hunter Valley, but until one month ago the ever-expanding campus did not have a functional gym room.

In recent years the school has been growing (from 200 students to more than 1000) and adding new

classrooms and buildings.

However, concerned about the childhood obesity epidemic and reports about youth mental health problems, Darren saw an important need to invest in physical education.

The new gym takes up the equivalent space of four classrooms and comprises a cardio room with 36 pieces of cardio equipment such as treadmills, rowing machines and exercise bikes.

The second room is devoted to strength training and houses the school's colourful array of plates, weights and strength machines.

The equipment was supplied by Synergy Fitness - an Australian-owned designer and manufacturer of innovative fitness equipment.

Darren says Synergy Fitness had a similar philosophy when it came to the health of young people and combining functional fitness with cognitive development. The company installed three SMARTFit Walls - panels attached to the wall containing LED sensory lights and activators which students trigger in a variety of ways to promote body movement.

Darren says the investment in fitness was all about looking after young people and also staff.

"We could have used the space for four classrooms for general learning but as a school we really believe in the importance of the physical fitness of our students." ■

**By Kat Donaghey, Editor**





# A school gym keeps kids physically and mentally active

**A healthy body can lead to a healthy mind and have a positive impact on academic performance and student wellbeing.**

Training the body to move is not just about maintaining a healthy physique but increasing brain productivity, function and memory.

And a school gym is one popular option for getting kids physically and mentally active that appeals to the current generation's preference for indoor activities.

More schools are opting to install gyms on campus, providing students, staff and the school community with access to fitness equipment that would normally require an expensive gym membership.

A gym can be built and outfitted

to suit the needs and budget of each school, with as much or little gym equipment as necessary.

## Industry opinion

### Benefits of a gym

Nick Aspinall, chief sales and marketing officer from Synergy Fitness, the only Australian-owned fitness manufacturer in the country, says all sports and fitness activities are good for students but the one of the major advantages of a school gym is that it is weatherproof.

Whether it's a scorching day or dark and rainy, a controlled climate gym is the perfect environment to perform cardiovascular and strength exercises.

"You can train any time of the day in a safe environment," says Nick.



"If it's 35 degrees outside you can run inside on the treadmill, or cycle and row as well as train safely with weights for strength."

"A gym is just another option for schools that are interested in the health and wellbeing of their students and addressing issues of obesity."

### Setting up a gym

There are no hard and fast rules when selecting gym equipment

but Nick Aspinall advises to ensure you have a mix of cardiovascular and strength equipment.

Cardiovascular equipment includes treadmills, exercise bikes, rowing machines, steppers through to the latest air displacement ergometers which allow users to train both cardio and strength on one machine and any other fitness gear that initiates aerobic activity. ►



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# Choosing the best sport and play surfaces



**The majority of schools across Australia would have some form of play or sports surface, whether it is synthetic or organic. No matter the surface or its desired use, there are certain considerations from a maintenance or purchasing position.**

Play surfaces tend to be either sand, bark, rubber or synthetic grass. Both new and existing surfaces are required to comply to the playground surfacing standard AS4422 and may be

influenced by the playground standard AS4685.2014. In order to ensure your surface - irrespective of whether it is organic or synthetic - performs as it was intended you may need to carry out ongoing maintenance as dictated by your suppliers' guidelines.

**There are pros and cons associated with all forms of play surfaces, some of the things to consider may be:**

- Your surface no matter its age will need to be

compliant to AS4422. Current obligations under this standard are that your surface be dropped tested every three years.

- Your synthetic surface should be or have been installed over a suitable substrate. This substrate should be concrete, possibly bitumen or a suitable quarry material layer approximately 100mm in compacted depth.
- A rubber surface may become firmer over time,

this is normally due to the surface not being cleaned and the accumulated debris filling the voids in the top layer. Sand from sand pits is a particular problem as its abrasive properties will shorten the surface's life.

- Synthetic surfaces cost more to install initially but the cost of ownership is lower and will in all likelihood provide a compliant surface for five to seven years
- Organic surfaces will need

- ◀ **Strength training – or resistance training – involves equipment that builds muscle strength and tone such as pin-weight machines, resistance equipment and free weights. "Also consider the sort of entertainment you want, such as TVs, and work out floor plans, determining spaces for cardio, strength and an open area for functional body exercises."**

## Maintenance and costs

Fitness equipment companies like Synergy Fitness specialise in managing or assisting with school gym projects from start to finish.

Their services include a full

equipment maintenance package which reduces the ongoing burden on schools. "Maintaining a gym is not the expertise of schools, they don't know how to design gyms, or stock gyms or build gyms so it's important to seek the services of someone who does," say Nick. "We also advise taking out a finance package so that it then simply becomes a monthly expense rather than sit on the school's balance sheet"

## Fitness equipment trends

One of the latest trends in fitness equipment is designed

specifically to exercise the mind as well as the body.

Cognitive training equipment requires students to activate the brain while undertaking a physical exercise.

An example includes the SMARTFit trainer which is placed on the wall and contains LED sensory lights and activators which students trigger in a variety of ways such as reaction-based, memory and alpha/numeric challenges. The students jump up and press a target which then activates a score tally for each hit so they can try and beat their

score each time they play.

Strength training equipment with bilateral stability control is another tool for activating the mind, this time by forcing the user to consider balancing the strength of both sides of the body – and therefore both sides of the brain – while performing an exercise with equipment that is designed with in-built 'instability'.

"Cognitive training equipment engages pupils more because they are training physically as well as being engaged mentally," says Nick. ■

*By Kat Donaghey, Editor*



to be cleaned and turned over regularly to ensure they are clear of potential contaminants and to introduce air into the organic matter to keep it open and able to do its job.

- Organic surfaces are your cost-effective solution at point of purchase but will cost more to maintain properly over the life of the play area.
- Synthetic grass is usually sand filled and will need to be groomed to remove debris from the pile and to keep it looking as it was when installed.

Sports surfaces again will likely be synthetic grass, rubber, polyurethane or acrylic based depending upon sport and whether they are indoor or external. There pros and cons are



similar to the play surfaces. The exceptions will likely be PU or acrylic.

During the stimulus package implemented several years ago a great deal of schools had multipurpose halls constructed. Most had a PU multi-layered sports surface installed, probably blue in colour. A common

complaint is that the surface is slippery and hard to use. This lack of traction is due to dirt, sweat and dust forming a polished layer on the surface. This can be rectified in many cases through a professional clean using the right equipment and chemicals. Many schools were never provided the manufacturer's guidelines in

regard to correct care and usage, so despite regular cleaning being carried out it is ineffective in maintaining the surfaces desired traction. Where your surface is beyond this it can be resurfaced cost effectively.

Acrylic surfaces for outdoor courts, are found in a multitude of colours. The comment we hear most is that our court is black. In most cases this is due to the court being in the shade and damp and is probably mould. This can easily be fixed by pressure washing the surface. A simple pressure wash every now and again will keep your court looking and performing as it should. As courts age you may find your concrete or bitumen slab will crack, again this can be repaired, however your cracks may reappear over time.

*By Arun Kosh, Surfacing Contractors Australia*

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# Keeping your cool improves student comprehension

**The temperature of a classroom has a direct impact on the brain's ability to learn.**

Although air conditioning is now a standard feature in offices, cars and homes, it remains a desired luxury that many schools are forced to do without.

Government funding for air conditioning is not provided to many schools which instead have to budget or fundraise in order to cool or heat their classrooms.

Experts, however, point out the importance of room temperature to learning, with anywhere higher than 28 degrees considered detrimental to concentration.

University of the Sunshine Coast School of Education Associate Professor Michael Nagel says studies dating as far back as the 1930s have shown a link between classroom temperature and learning ability.

Prof Nagel says the human brain is extremely heat sensitive which directly impacts on cognition.

"It is significant to note that there is not a great deal of new research in this field as it is widely accepted that heat is bad for cognition and learning and as such new studies aren't warranted," says Prof Nagel.



Images: Daikin

## Studies over the years have made findings such as:

- Heat stress dramatically lowers scores in intellectual and physical tasks. – *Taylor, H.L. and Orlansky, J. (1993).*
- Reading comprehension declines when the ambient temperature of a room reaches 23 degrees Celsius. Math skills decline above 25 degrees Celsius. – *Lackney, J. (1994)*
- \* Classrooms kept between

20 and 23 degrees Celsius are the most comfortable for students. – *Harner, D.P. (1974)*

The consideration for schools is therefore whether the outlay of dollars is worth the trade-off in creating pleasant learning environments with at least one less distraction.

Schools that invest in air conditioning must also ensure their spend is worthwhile in the long run, selecting appropriate systems, developing a precise maintenance program and finding the best ways to cut energy costs.

## Industry opinion

*Mitsubishi Electric senior product support engineer Ari Grimekis says wall-hung split system air conditioning is by far the most popular with schools purely because of price.*

"They are the cheapest form of air-conditioning you can get and you just put them on the wall in the classroom, connect your piping and wiring and that's it.

"The next option is a ducted system where you have a sealed unit in the ceiling but they can cost about 50 percent more and are more involved to install.

"Ducted systems have much better filters, a longer lifespan and better maintenance.

"But the trend is for split systems and that is cost driven."

Daikin national product manager Raj Singh says air conditioners varied in size and power.

"The one that's just right for each application depends on how big or small the space is, the number of classrooms that need to be air conditioned and many other factors," says Raj.

"Choose an air conditioner that's appropriate for the classroom size and it will operate much more efficiently. If it's oversized, it will waste energy, while an undersized model will strain to maintain its temperatures and wear out a lot sooner."

## Other factors to consider include:

- **Classroom size** – The larger the area and student population, the higher the air conditioner capacity required.
- **Insulation** – The better the insulation in the walls and ceiling of the room, the lower the air conditioner capacity required. ►







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- ◀ ▪ **Window size** – The size of your window and insulating properties of the glass will have a greater effect on the size of the air conditioner than the walls and ceilings of the room. Having larger windows in a room may mean a larger capacity system due to the higher solar gains into the space.
- **Aspect** – Rooms that are facing east or west may need a different capacity air conditioner compared to a north facing room.
- **Climate** – Schools built near the coast will require different capacity air conditioners compared to inland suburbs.

## Maintenance

A badly maintained air conditioning system may only last half as long as it should, warns Ari from Mitsubishi.

Once a system is purchased, schools should enforce a diligent maintenance program undertaken by staff or contractors who know what they are doing.

Ari suggests seeking staff training from your air conditioning supplier which is often free of charge.

"Maintenance involves cleaning and taking out filters to wash, checking the heat exchange and fan barrel to ensure they are not clogged with dust.

"If filters are not cleaned, the dust pulls through the filters and clogs the unit and in some cases the systems can't be salvaged.

"Keeping it clean should be a priority because keeping it clean goes hand in hand with energy efficiency and the life of the product.

"I recommend maintaining your system every month. Train your maintenance staff so they know what's required or if you use contractors, ensure the contractors are trained.



Image: Mitsubishi Electric.

"Proper maintenance could make the difference between your system lasting ten years or five years."

Daikin's Raj Singh recommends a monthly clean. Domestic air conditioners are recommended for cleans at the start of every season but because school systems are used almost every day, Raj advises monthly maintenance.

"If the filters are clogged, this can reduce airflow across the coil and hence impact on the cooling and heating capacity delivered into the occupied space and also increase operating costs."

## Energy efficiency

If your school is going to the expense of purchasing air conditioning then it is important to consider the long-term cost of power.

Ari says modern products are much more efficient than their predecessors which is why he recommends updating anything older than ten years.

"A new system will have about half the energy consumption of

an old air conditioning unit so it is worth looking at replacing them purely on cost savings," he says.

The difference between modern entry-level products and their high-end counterparts when it comes to energy efficiency is not as much as it was in the past.

"The cheaper models are closing the gap with higher priced versions," he says.

Daikin's Raj Singh recommends using the Energy Rating Label – which ranks products from one star to 10 stars – as a starting point to select an efficient system.

"The bar is set very high by the government, ensuring that air-conditioners sold in Australia are amongst the most energy efficient globally."

## System controls

Energy efficiency goes hand-in-hand with new Smart Controls that enable schools to set usage parameters.

"You can do a lot to reduce the energy costs of the school by

using the Smart wall controllers," says Ari.

"These controllers give flexibility to set programs on how you want your air conditioning systems to be used so they are not using power when they are not needed.

"You can lock the range of the temperature, you can set the hours in which they can be used.

"You can have them running on timers so they automatically switch off.

"We have some schools that use a motion sensor on our wall controller that detects movement and body heat so they know when to turn on if a room is occupied and turn off when it isn't.

"Teachers can just walk into a room and not have to do anything."

## Temperature

Many variables come into play when deciding the best temperature for a classroom and people will always have their differences.

But Ari is adamant that energy savings should not be the key consideration for setting the climate of a room.

Anywhere between 22 degrees and 24 degrees is okay. You hear schools talking about 26 degrees to save energy but you will find that is too warm.

"I think the temperature has to be kept as close to 23 degrees as possible.

"It's a learning environment and students should be comfortable and you shouldn't be sacrificing comfort for energy.

"You should look at other energy saving measures such as high unit efficiency, not temperature."

Daikin's Raj Singh says it's important that students and teachers are neither too hot or too cold. ■

By Kat Donaghey, Editor



# Isn't it time you **updated** your air?

Remember how power hungry light globes were 15 years ago?  
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- » Quiet operation
- » Economic operation
- » Reverse cycle

\*Additional adaptor required per unit for WiFi compatibility. 40% energy efficiency is for cooling mode comparing the Mitsubishi Electric MSH-RV Series (2002) to MSZ-GL Series (2017)

# Keeping up appearances with a facilities management provider

## Outsourcing school maintenance can save you money and headaches.

An overgrown playground and peeling paint does not create a good image for a school which is why the role of facilities manager or groundskeeper should not be overlooked.

With today's parents setting higher expectations and schools now in a constant battle to protect their image, it pays to ensure campuses are visually pleasing.

Abiding by a proper facilities maintenance schedule not only keeps school manicuring up-to-date but can increase the longevity of buildings and assets.

Research also indicates that the school environment may have some impact on young people's education and they may gain more inspiration and enjoyment from a beautifully maintained learning environment.

Traditionally, schools have employed their own groundskeepers and maintenance staff to undertake everything from lawn maintenance to pest control.

But in an ever-changing economic environment, greater school workloads and more strains on the budget, many schools are outsourcing the work.

Outsourcing facilities management has its pros and cons, with one major benefit being the ability to concentrate on your core business of education while others deal with



Images: Programmed Property Services

the never-ending outdoors work.

Facilities management service providers can cover a range of vital services including painting, landscaping, grounds maintenance, interior fit-out, signage, pest control, cleaning and waste removal.

### Some of the benefits of outsourcing facilities maintenance include:

- Budget savings: Outsourcing can work out much cheaper than having to employ your own maintenance staff. A specialist company can also pass on cost savings due to economies of scale.
- Access to a large labour force means the work can get done in a short time frame.
- A single point of contact makes coordinating work easier and more efficient than hiring a range of tradies.
- Contractors have the technical knowledge and can tailor a maintenance solution to suit your specific needs.
- Contractors have access to specialist and latest equipment and are trained to operate it
- No capital tied up in equipment and maintenance of depreciating equipment.
- Productivity of operatives can be measured to industry best practice.
- A broad and deep resource base of skilled, licensed and qualified trades professionals who can offer not only quality service, but also the ability to finish jobs within tight timeframes, even it means working through weekends and public holidays.
- Innovative solutions that are safe, for example the ability to deal with difficult locations, working at heights and sensitive access areas. ►





## supplier profile

## DANIHERS FACILITY MANAGEMENT

## State of art Facility Management

**Danihers Full Facility Maintenance Program is state of art in the service delivery, workplace health and safety, building team service culture, productivity, service outcomes, sustainability, reporting and communication standards.**

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Partnering with a Facilities Management company such as Danihers will enable the Leadership team at the School to focus on the curriculum and wellbeing of the students. Therefore, Facilities Management company will then manage site compliance, staff competencies, training requirements, service quality and delivery of both internal and external areas of the facility. Communication methods and internal processes are also crucial when wanting to develop a fully optimised facilities team.

We have a range of systems and processes in place to ensure stringent infection control, hygiene and safe cleaning practices, which has led to experience in maintaining the precise cleanliness of a controlled environment in large facilities. Our wealth of experience in the Education sector demonstrates our commitment and understanding of the industry.

Outsourcing your Facility Management to a company like Danihers will increase productivity, quality of the service level and will provide you with a diligent and concise management of external service contractors.

Danihers IT platform will provide the Principal with real time information on the facility, job progress and reporting. They will know where the job is up to on their mobile device, anytime, anywhere.

Danihers are proud to have implemented a state of art IT platform which delivers real time information to our clients.



### Our Lady of the Sacred Heart College

*The school needed a partner with the unique ability to pull together a range of cleaning management, property maintenance, landscaping and security services to provide a comprehensive facility management solution at their site in East Bentleigh. Danihers were chosen in 2008 as an on-site Facility Manager to work closely with the management team at the college to proactively provide expert advice and meet their needs on daily basis. "We have enjoyed the positive, caring, inclusive and professional approach that Danihers has brought to our college."*

**- Anne O'Loughlin, Principal, Our Lady of the Sacred Heart College**

#### Our company's values are based on:

- Ensuring we're always **approachable** and listen to our clients
- Behaving with **honesty** and **integrity**
- Delivering **professional, high-quality** service
- Creating client value through our **service-oriented** approach
- Attracting, developing and retaining **passionate** team members

**We at Danihers are proud to say, "It's all about our people, always has been and always will be". ▲**

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| 2. Cleaning and Specialty Cleaning | 7. Indoor and Outdoor Maintenance  |
| 3. Sustainability                  | 8. Security                        |
| • Energy Audit                     | 9. Landscape and Open Space Design |
| • Waste Management                 | 10. Site Safety Compliance         |
| 4. Manage all Trade Services       |                                    |
| 5. Ground and Garden Maintenance   |                                    |

**Danihers**

- Advice and consultation that will help you present a professional-looking site that complies with local council legislation, safety and environmental regulation and even promotes sustainability.

## Industry opinion

### Save time

Danihers Facility Management managing director Steve Thorogood says partnering with a facilities management company takes away the headache of operating a school's own property management team which may often lack proper direction, training, KPI measurements or HR training and development, due to the greater workload given to the senior leadership team at schools.

"Facilities Management companies like Danihers will manage site compliance, staff competencies, training requirements, service quality and delivery of both internal and external areas of the facility," says Steve.

"This will allow the college to continue to provide quality education and not have any concerns when it comes to your school and facility."

Nick Krollig, from Programmed Facility Management, says facilities management enables differing maintenance service lines to be bundled under one service provider.

"A school can simplify its facilities management by liaising with just one point of contact yet addressing all of its facilities management needs," says Nick.

"This provides administrative efficiencies such as consolidated reporting which can also lead to operational efficiencies such as procurement leverage."

Adds Nathan D'Couto, from Programmed Property Services: "Engaging in a facility management programme



Image: Programmed Property Services

saves schools significant time as schools deal with just one contact rather than having to manage multiple contractors which can be fraught with inherent risks as it involves schools having to simultaneously manage multiple contractors."

Danihers' Steve Thorogood says outsourcing can lead to cost savings by managing external providers more efficiently. To get a quality service outcome obtain three quotes from qualified service providers, be proactive in asset management and maintain a dynamic environment with regards to HR, planning the day's schedule and measuring and providing feedback.

Facilities management companies like Danihers analyse a school's footprint, the number of buildings, students and many other factors such as the school's existing facilities staff to generate a maintenance framework.

"It's important to consider the strengths and limitations of the existing teams that currently deliver the service; there may be an exceptional talent onsite that just need further training and direction, leadership and engagement," this has been the case in many of our transition sites, says Steve.

"Completing a gap analysis or internal audit is also another valuable process which enables schools to understand what is currently being delivered versus what is required. It will highlight

the gaps that currently exist."

Programmed Facility Management's Nick Krollig says schools often don't have their own specific staff member identified to manage the maintenance that rears its head from time to time.

"Engaging a facilities management service provider ensures that all of your systems and requirements will be compliant and meet legislative requirements," says Nick.

### Cost savings

Danihers Facility Management managing director Steve Thorogood says time and money can be saved if you engage the right facilities management organisation.

In one example a school was able to save \$30,000 each year when its facilities management audit advised replacing the bin system with one large 3,000 litre bin and reducing the waste collection frequency to two times per week. This saving was genuine.

"Outsourcing your facility management can increase productivity, quality of the service level and will provide you with a diligent and concise management of external service contractors," says Steve.

"We suggest looking for a company that has an IT platform which will provide you with real-time information on your facility, job progress and reporting.

"You will know where your job is up to on your mobile device, anytime, anywhere."

Programmed Property Services' Nathan D'Couto says facility management providers employ their own gardeners, painters, carpenters and more meaning schools can save money.

"Schools do not have to incur costs that are marked up on already marked-up prices which often happens in the sub-contracting model."

### Negotiating a contract

Nick Krollig, from Programmed Facility Management, advises to consider factors such as the term of the contract, available options and how the options are to be exercised.

"Do you want a long term provider, or short-term initially? What service levels do you require? What items should be included in the scope?" says Nick.

"Another important consideration is building in the ability to make change mid-term. If you want to be able to increase or decrease the scope or specification during the term this should be considered while the contract is being drafted.

"Other important considerations include the level of reporting required, as well as the governance structure required to interact with the service provider." ■

By Kat Donaghey, Editor



## supplier profile

## PROGRAMMED PROPERTY SERVICES

## Outsourcing maintenance so Principals and School Leaders can better focus on themselves

**School principals used to be able to focus mainly, if not solely, on curriculum planning and student well-being. Not so nowadays.**

While still core focus areas, these responsibilities have been joined by an ever growing list of responsibilities that include maintenance, budgets, school presentation and safety. Recent studies suggest that time spent on maintenance activities leave school administrators – principals, senior school executives, bursars and property managers – with less capacity to fulfil their core responsibilities, even when they share its burden.

The NSW Department of Education found that principals spend 40 per cent of their time 'managing their school': facility upkeep, technology issues, tree audits, minor asset repairs, building maintenance, and other ad-hoc tasks crucial to the school's presentation and operations needing immediate attention. Understandably, these exacerbate personal stress levels.

Outsourcing maintenance to external specialists reduces the toll on principals and their team. And, yield better operational time, cost and quality outcomes.

### Benefits of Outsourcing Maintenance

With strategic outsourcing of school maintenance, school administrators can better balance their workloads and accountability pertaining to leading, managing and developing the school. It also eases stress, helping them to perform – and feel – better overall.

**Outsourcing maintenance to a professional provider benefits school executives by:**

- Freeing this senior management team and other internal resources to focus on core educational activities instead of managing unfamiliar tasks which can include legislative and compliance requirements they may not be aware of.
- Providing access to specialist experts who can quickly and effectively resolve any planned and unplanned maintenance issues
- Easing budget woes; schools can access quality, well-maintained plant, equipment and technology without the need for costly expenditure unrelated to education and learning
- Reducing unexpected costs and allowing more predictable budgeting through proper management and maintenance scheduling

Flexibility is another advantage, as there is always the option to outsource as much or as little as required in order to achieve the best results for the school.

These benefits make entrusting a school's maintenance to a professional company a compelling strategy able to yield improvements on both organisational and personal levels.

**Access the FREE School Maintenance Efficiencies whitepaper which discusses the administrative challenges schools encounter regarding maintenance, and learn how to reclaim your time, energy and resources through a strategy for outsourcing at <http://goo.gl/exesii> ▲**



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# How to enhance your school campus with durable outdoor furniture

**New table and bench designs are made from materials that last longer than ever.**

In many playgrounds it remains almost standard practice for students to spend lunch breaks crossed legged on concrete or lounging on the grass.

But increasingly schools are investing more time and dollars in outdoor table settings, benches and shelters that enhance the look of a school while offering comfort to students.

With an ever-increasing range of exciting new styles available, the trend is shifting in favour of jazzing up outdoor areas to appeal to students' aesthetic tastes.

Although many schools still favour the comforting tones of traditional wooden benches, new product materials now mean they can have the best of the old and new, built to last for decades.

Outdoor furniture on school campuses can generally be separated into two areas:

\*Outdoor tables and seating for students to eat lunch or chat with friends during the break

\*Group seating and tables for outdoor learning

Lunchtime furniture has the purpose of encouraging students to sit together in groups during meals or share the company of friends in enjoyable spaces.

Outdoor learning furniture should



Schools use buddy benches to encourage students to look out for one another. Image: Draffin Street Furniture.

be flexible enough for students to congregate around a teacher or work in groups, with practical writing surfaces.

Of course, outdoor furniture is yet another expense that schools must consider when examining tight budgets.

To help set you in the right direction *School News* magazine speaks to industry experts about the best outdoor settings and how to make the most of your dollars.

## Table Settings

Today's popular table settings are designed to encourage inclusiveness among students, says Draffin Street Furniture CEO

Ian Draffin.

The latest designed "round tables" that can seat up to eight students ensure each person has equal placement as they gather to eat lunch or engage in social interaction.

"A round table is an inclusive shape for kids who are sitting in a group," says Ian.

"The shape enables the kids are able to focus on each other and there is no 'bad' seat.

"Bright colours are also very useful to help create a space that encourages creativity."

Outdoor Living Plus director Jan Swanepoel says traditional

rectangular tables with attached bench seating also remain popular, particularly for schools on a budget.

"The main concern with schools is usually budget and they want quality that is going to last," says Jan.

"Picnic tables are cost effective and popular because of the price point."

Jan says picnic table settings can comfortably seat six or eight students, depending on size.

There are also options for inclusive tables that provide space at the head of the table to seat a wheelchair for special needs students.

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Jan says schools should take into consideration the height of the table and benches when selecting what is best for their campus.

"Obviously kindergarten and primary school students will need different table heights to high school students," she says.

"Also buy from a company that will look after your needs and work with you and it's better if the products are Australian made and can be customised for your specific needs."

### Bench seating

Like tables, the traditional rectangular timber bench remains the most commonly installed outdoor bench on school campuses, mainly because of cost.

However Jan says a range of new seating options are gaining increasingly popularity with



Round tables promote inclusiveness, with no "bad seat". Image: Draffin Street Furniture.

schools wanting to create a more visually interesting outdoor space.

Bench seating is produced in a range of materials – including aluminium, timber, and recycled materials – and comes in a variety of shapes.

A curved bench offers a solution to teachers wanting to take their

classroom outdoors as it allows a number of students to sit side by side in a semi-circle while facing the instructor.

"There is an increasing demand for flexible seating options, like a platform bench, a bit like a small deck, where students can perch on the edge or sit on top and play

games," says Jan. "They can be various sizes and work well under shade sails."

"Another option is modular block seats which can be grouped together to create platforms or shapes and over time they can be rearranged, creating a flexible space." ►



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Traditional picnic tables with attached bench seating remain popular. Images: Outdoor Living Plus.

## ◀ Outdoor furniture materials

Durability should be a key consideration when choosing materials for your outdoor furniture.

Draffin Street Furniture CEO Ian Draffin says many schools still prefer the warm tones of wood but needs regular coating to keep it looking good.

Ian says new materials, such as recycled composite, achieve the wood look – complete with timber grains – without the ongoing maintenance.

“Composites are cost effective because they don’t require that ongoing maintenance,” he says.

“Recycled plastic is also a great option. Zero maintenance and bright colours are a perfect fit for schools.”

When choosing a material for outdoor furniture, Ian says it’s important to consider the long-term sustainability of the product.

“There is no one-size-fits-all solution. It’s important to talk to suppliers you trust about finding the material that gives you the look and functionality that you want, but that is also durable enough for the application.”



Outdoor Living Plus director Jan Swanepoel says an eco-friendly wood composite is a popular and cost-effective material that lasts for many decades without the need for maintenance.

“Wood composite is made for the outdoors. It doesn’t matter if you leave it in the sun, you don’t need to regularly maintain it,” says Jan.

Jan says wood composite also caters to the desire for a “wood look” with the added bonus of durability and no fuss.

For schools concerned with environmental credentials, wood composites also tick the

sustainability box if they are *FSC Certified* (Forest Stewardship Council).

## Sheltered furniture

A single unit that provides outdoor furniture with its own shade is an economical option for schools.

Table settings, benches and other seating have the option of medium or large roof sizes, negating the need to build a separate outdoor coverings or gazebo.

“Sun safety is so important for schools,” says Draffin Street Furniture CEO Ian Draffin.

“Sheltered furniture is a great option as it simplifies the process of providing seating and shade into a ready to go solution.”

## Buddy benches

As part of antibullying and social awareness campaigns, many schools have been installing a unique bench on the playground known as the Buddy Bench.

Often brightly coloured and decorated with positive words such as “Friendship”, the bench is designed to encourage students to look out for others who are lonely or upset.

“The concept of the Buddy Bench is if a child is feeling lonely or doesn’t have anyone to play with they sit on the seat,” says Ian.

“The other kids are taught by the school that anyone sitting on that seat would like someone to play with, and hopefully reach out to them.”

The installation of a Buddy Bench requires an all-of-school education program so students understand their purpose. ■

**By Kat Donaghey, Editor**



# SCHOOL VISITOR MANAGEMENT



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