

Teacher Staffroom Episode 7: Celebrating STEM

Rebecca Vukovic

Thanks for downloading this episode of Teacher Staffroom, where we catch you up on the latest evidence, insight and action. I'm Rebecca Vukovic.

What a month we've had here at Teacher magazine! It's been busy but exciting – and safe to say it's been packed full of interesting stories and content for our readers. From Research Conference, to Science Week, to our very first live event with Dr Lyn Sharratt – there's so much I'd like to look back on and share with you. There's no time to waste, let's get straight into it.

Right at the beginning of August, ACER hosted its annual Research Conference in Melbourne. Of course, *Teacher* magazine was there to speak to delegates and presenters, and put together a range of content for you to enjoy. Our coverage began with an article about [traditional classrooms and innovative learning environments](#). Jo Earp spoke to Dr Wes Imms from the Melbourne Graduate School of Education and the University of Melbourne's Learning Environments Applied Research Network. Imms presented his work at Research Conference on how teachers can make effective use of teaching spaces to help students engage in deeper learning.

Still at Research Conference, we published a piece [on preparing students for life and the workforce](#) by equipping them with skills such as problem solving, collaboration, critical thinking and creative thinking. We spoke to conference presenters Loren Clarke and Melissa Hughes from Eltham High School in north-east Melbourne, about their approach to developing these capabilities over time, and what they look like in terms of teaching and assessment. This tied in well with the overall conference theme, which was: 'Preparing students for life in the 21st Century: Identifying, developing and assessing what matters'.

Here's a quote from Loren Clarke on how they've been restructuring the curriculum and developing a continuum for these 21st Century capabilities.

You actually have to start from: What does the curriculum look like now? What do we want it to look like? How do we get there? How do we break down some of those barriers? It took several years of actually doing work in the classroom with kids around these capabilities and doing work around our interdisciplinary learning to be able to see what the continuum might even look like.

Here's some questions to think about in your school setting.

How much focus does your school give the general capabilities? To what extent do you draw on the curricula in reference to development of these skills? What tools and resources do you use to map and monitor progress? And do they link to your school context and how often are they reviewed?

One of the highlights of Research Conference this year was the In Conversation session between ACER's CEO, [Professor Geoff Masters and Professor Neil Selwyn](#) from Monash University on preparing students for life in the 21st Century. We recorded the conversation and published it as a podcast shortly afterwards. Here's an excerpt from the episode – its Professor Selwyn discussing what he thinks schools will look like in 10 years' time.

One of the things that worries – I don't think schools are going to disappear, but I do think they may get dumbed down to the level of just being kind of glorified childcare with a bit of online education tacked onto the side of it. And I do think teachers might end up just being employed people that just steward classrooms and don't have the expert domain skills and the pedagogic skills that we see now. My worry is that we get this kind of, as I say, this two-tier system. I agree with you – the basic materials of 2029 are what we have now. The staff, the buildings, the

curriculum. But as I was trying to get at with the skills, I don't think we need to change any of that to make the curriculum really work. I don't think we need to change the human workforce that we have to make it really work. And the buildings are just the buildings. I mean, they could be better but you get what you get.

This month, Australia celebrated Science Week with a whole heap of events taking place in schools and the wider community, all with the aim of increasing engagement and interest in Science. Here at *Teacher*, we published a piece that looked at what the research says about [how children perceive Science](#). One study found that only 23 per cent of primary school students said they'd like to work in a Science-based career, and another found that adolescents perceive a job in STEM to be most closely related to Engineering.

Here's something to consider.

In your school, what are some student misconceptions about careers in Science? And how do you go about challenging these misconceptions?

To finish off Science Week, we published an infographic on [student attitudes towards STEM](#), citing statistics from a study by the Australian Department of Industry, Innovation and Science. The study asked students what they believe STEM stands for, what jobs they think they can get with a STEM degree, and their confidence in STEM subjects. Make sure you check out the infographic to see how they responded.

Remember, if you'd like to explore any of the content I've mentioned in this episode, you can find links to all of them in the transcript of this podcast at teachermagazine.com.au

This month we also launched [a new video series on Making Maths fun](#), hosted by the wonderful Holly Millican, a Mathematics teacher from South Grafton High School in New South Wales.

In her first video in the series, Holly shared the top revision activities that she uses in her classroom, including a self-made activity called Revision Jenga, a QR code-based activity called Plickers, and a murder mystery activity called Whodunnit. All the revision activities she mentions can be used for a range of topics and students of different year levels and abilities.

In her Maths lessons, Holly really strives to move away from the textbook and instead look for innovative ways to engage her students. Here's a short excerpt from her video:

As Maths teachers, it is all too easy for us to just flip to the end of the chapter and use that really nice little chapter review we've got given there. But I know personally for me, when I was a high school student, there is not one chapter review that I remember doing. There is not one chapter review that I was like "Oh my God, this is exciting!" Never. They're not exciting. They're 40 questions, that yes, absolutely review the content and that's what we want, but let's try and use them in a different way, a way that gets the kids excited, a way that gets them to go, "Hey, I remember that! We did that crazy murder mystery thing and I remember learning that." Give them something to reference it to, more than just the content. Because while some kids yes will undoubtedly enjoy doing the chapter review and will be able to do it and remember the questions – it's not for everyone. So if we can expand this revision and really try and make it more accessible to more students, then I feel like that's a good thing.

So what are your favourite Mathematics revision lessons? What have you found your students enjoy most? Make sure you check out Holly's suggestions and discuss with your colleagues whether these activities are something you could try with your own class.

And finally, this month we also launched our first ever live podcast event, [Teacher Talks with Dr Lyn Sharratt](#). When we announced the event in early August, it was booked out in less than an hour, which was just so exciting for us and a testament to the popularity of the podcasts and the talent we interview on them.

I had the pleasure of interviewing Lyn on her approach to Learning Walks and Talks in front of that live audience here in Melbourne. It was such an interesting discussion, packed full of great insights and conversation.

But I know many of you were disappointed you weren't able to attend, but you'll be happy to hear the entire podcast was recorded and will be made available to our listeners on 5 September via our usual podcast channels, SoundCloud, Apple Podcasts and Spotify. Whichever platform you use, we recommend you subscribe to the channel by searching 'Teacher ACER' and clicking on the 'follow' or 'subscribe' buttons. That way, each episode lands in your feed as soon as it's published. It's a really convenient way to ensure you never miss an episode!

That's all from me, and you're all caught up on the latest evidence, insight and action. If you want to take a closer look at anything I've mentioned in this episode, you'll find all the links you need in the transcript for this podcast at [teachermagazine.com.au](https://www.teachermagazine.com.au). Thanks for listening!