

Jobs of the Future in Western Sydney

Educating and training our kids in the jobs of the future starts in the classroom. It's essential that we get the settings right.

Submission to the Quality Initial Teacher Education Review
16 July 2021

FOREWORD

Are our kids being educated and trained with the skills they need to take on the jobs of the future?

This is question I have been asking since my first speech in the Australian Parliament, and will continue to ask, because its answer will determine the future of the next generation in Western Sydney.

When I speak with teachers from schools through to tertiary education in universities, TAFE, and other education institutions, there is a common theme and a common concern - our young people are not being adequately educated in the subjects that lead to careers in the jobs of the future, particularly in science, technology, engineering and maths.

If we aren't educating our kids in these important subjects with high quality teaching, how are they possibly going to be ready for the jobs of the future?

These emerging job-creating industries need an ongoing and increasing stream of high-quality students to fuel their future workforce.



Melissa McIntosh MP
Federal Member for Lindsay

In this submission, I have brought together perspectives from local educators at every level and leaders in our emerging industries.

It is critical that, when we shape the education of our children, their future career opportunities are at the front of mind.

There is nowhere this matters more than in Western Sydney, where the jobs of the future are just around the corner. The Western Sydney Airport alone will create around 26,000 jobs by 2031, with thousands more generated by the Western Sydney City Deal.

The Morrison Government's commitment to our region is also encouraging business investment and jobs growth, giving the private sector the confidence to invest in the long term opportunities in our community,

The jobs of the future will soon become the jobs of today, and it is essential that our local kids are getting these jobs.

Ultimately, whether these jobs go to local people will be decided in our classrooms. The quality of the teachers and what they are teaching in these classrooms will have the greatest impact.

TEACHING STRATEGY MUST MATCH JOBS STRATEGY

The Australian Government is improving accessibility for more young people to gain the skills and training to fuel high-growth areas. This is part of the job creating strategy to tailor the path for job seekers to meet employer demand.

New apprenticeships are at a five-year high, and up 141 per cent from the December quarter in 2019. This is largely due to the Boosting Apprenticeships Commencements program. This wage subsidy program is supporting over 2,200 apprentices and trainees in my electorate of Lindsay, helping more young Australians get their start in the emerging industries. Many local businesses see their apprentices as a long-term investment that will power the growth of their business.

“Baker & Provan has been in business in St Marys for 75 years and is proud to have trained over 70 apprentices during this period. I have a personal passion for apprenticeships and we currently have 6 apprentices between 1st and 4th year including 2 young women commencing their fitting and machining trade.

“Our current and graduate apprentices are the future of Baker & Provan developed through their TAFE training and the guidance of our apprentice mentor and senior tradespeople.”

- Mal Hiley, Managing Director Baker & Provan

The Australian Government is also focusing on directing university students to the jobs of the future, through the appropriately named Job-Ready Graduates package. This package is supporting up to 30,000 new university places, and up to 50,000 new short course places in areas projecting increased demand for jobs.

The package improves access to courses including engineering, computing, health and nursing by significantly reducing costs. It is an admirable and necessary strategy to incentivise more students to enter these fields with high growth potential.

But what do these fields have in common? Science, technology, engineering and maths. To reach our full potential, the strategies to encourage more students into these job-creating industries must start before students are perusing university courses or starting an apprenticeship.

The Boosting Apprenticeships Commencements program and Job-Ready Graduates Package are important policies to help fuel the Australian industries leading our job-led recovery from the COVID-19 pandemic. However, these initiatives to pave the way for young Australians into the jobs of the future is occurring predominantly at a tertiary level. The groundwork to cement a strong foundation for the future generation of highly skilled workers in the emerging industries must start long before students enter University or TAFE. We need an ongoing, and increasing stream of workers equipped with the right skills and training. This starts in the classroom. We cannot continue to overlook the impact of primary and secondary schooling in preparing students for the jobs of the future. It's vital that we place the same emphasis on preparing school students for the high-growth emerging industries as we do for apprentices and university graduates.

This includes how we train our teachers to educate our children. After all, how will our kids be educated and trained in the jobs of the future if their teachers aren't?

STEM TEACHING BY STEM TEACHERS

The Review's Discussion Paper comments on the need to attract more mid-career professionals into teaching. Crucially, what is missing is the need for more of these mid-career professionals to be STEM professionals. Attracting, recruiting and maintaining more STEM professionals into teaching will not only improve the quality of STEM teaching in the classroom, but also encourage more students to pursue the subjects that will lead to STEM careers.

"We need to have a profession as diverse as the children and young people who are in schools. Initiatives to attract a more diverse cohort of candidates to undergraduate and postgraduate teacher education programs, including a strong media campaign, early identification with bespoke routes into teaching, financial incentives, and the expansion of more diverse university-school partnerships could assist in achieving this aim.

Supporting a variety of pathways to become a teacher are important; however, we need to be absolutely rigorous about the quality of these pathways to ensure the supply of high-quality graduates."

- Professor Michele Simons, Dean, School of Education,
Western Sydney University

Across Western Sydney, there are examples shining through in the power of STEM taking place in the classroom. The former Minister for Industry, Science and Technology, the Hon Karen Andrews MP, joined me at Jamison High School to launch the Girls in STEM Toolkit. This is an important initiative to encourage girls to study and pursue careers in STEM. A fundamental component of the Toolkit is providing real-life stories about women studying and working in STEM. This gives young students a demonstration of what a career in STEM could mean for them. But is this enough to translate into tangible career outcomes? Attracting more STEM professionals – chemical engineers, biologists, and even astrophysicists into the classroom will personify the exciting jobs that await those who pursue STEM subjects on a consistent, day-to-day basis, giving students a clear goal.

The second obstacle is that the STEM teachers in schools are far too often not teaching STEM subjects. The Discussion Paper notes that '17 per cent of STEM teachers are not teaching STEM subjects at a year 10 level and are instead teaching non-STEM subjects.' This is an alarming figure, particularly as Year 10 is often when students are honing in on their career interests. We must be doing everything in our power to encourage more students to pursue a career in STEM fields. Keeping STEM teachers side-lined will only hold us back. We must both attract and effectively employ STEM professionals in our classrooms to educate and inspire the next generation.

Effective STEM teaching in the classroom should not solely depend on enticing mid-career STEM professionals to become teachers. ITE graduates must also be equipped with sufficient STEM training to educate students towards the jobs of the future. One of the Review's primary focuses is to 'prepare ITE students to be effective teachers.' It is essential that they are also prepared to be effective science, technology, engineering and maths teachers. This must be prioritised within the ITE curriculum. Exposing ITE students to emerging fields such as coding and robotics will mean they can be effective STEM teachers in the classroom from day one, while preparing their students to take on the jobs of the future.

LOCAL SCHOOLS + STEM EDUCATION = LOCAL JOBS

In a survey of over 720 residents of the electorate of Lindsay, 'Supporting local jobs' was marked by almost 40 per cent of respondents as one of their top priorities for the Australian Government.

It is not just about creating more jobs, we must be giving local people the best opportunity to work where they live. Today, only five per cent of people in Western Sydney live within 30 minutes of their work. As someone who commuted for over 10 years, there is nothing I want more for our community than good local jobs.

Western Sydney International Nancy-Bird Walton Airport has the potential to be transformational not only for Western Sydney but for our whole country. The blueprint that has been decades in the making is now being brought to life and the result will be thousands of jobs, expanded export opportunities and new industries that we haven't yet thought of. Every dollar invested by the Government in the Airport will generate \$1.80 in return to our economy. By 2063, the Airport will contribute over \$5.8 billion per annum to our national economy, while business profits are forecast to increase by \$2 billion a year. The key to unlocking all this is the aerotropolis and local jobs – in agriculture with local produce exported to Asia and the world, in tourism, in advanced manufacturing, and even in world-class space manufacturing capability that could boost and transform our national space industry. But we aren't there yet. Building the puzzle and bringing it all together is going to be a huge task in persistence and determination, and it is what I'm committed to do.

People want to live, work and stay in our community, and as parents, we want our children to stay too. How do we move the dial so that more people can work where they live? The answer is in Lindsay. We ensure that Lindsay's world-class education institutions, which are going to be taking full advantage of Western Sydney's supercharged infrastructure development, are training our local kids in the jobs of the future.

The key to this is educating them with the skills they need for these jobs of the future in Western Sydney's emerging industries. This must begin in the classroom. It must be done by more STEM professionals. And it must be done now, because these jobs are right around the corner.