

THE REVIEW OF
SENIOR SECONDARY PATHWAYS
INTO WORK, FURTHER EDUCATION AND TRAINING



DISCUSSION PAPER

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Message from the Chair

Young people today are faced with multiple challenges in making decisions about their future. Their choices are becoming harder.

The range of pathways available beyond schooling is more diverse than ever. Fewer young people are taking linear pathways from school, through further education or training, into full time work. The good news is that there exists far more flexibility than in the past for young people to start again or change direction. Poor decisions at school can be overcome. But the bad news is that these flexibilities are often poorly understood, particularly by those who need them most (and those who advise them).

At the same time, the workforce is undergoing severe disruption. A fourth industrial revolution is underway, prompted by technological change, globalisation, artificial intelligence and machine learning. This is having a profound impact on the way young people need to undertake education and training, and the types of jobs that will be available to them in 10 or 20 years' time. The one thing we know for certain about the 'robotic age' is that the future of professional and trade skills is becoming more uncertain. It is clear that young people will need to have learned how to keep updating and adapting their skills over their working lives.

The fragmentation both of learning options and sources of information and advice about them means the benefits of alternative pathways and increased choice are often not being realised. Some young people are left struggling to follow routes that do not suit their skills or aspirations, find themselves trapped in dead ends, or spend time and money on gaining qualifications beyond what they need for their chosen career.

Young people need to be better informed to make learning choices when they are still at school - decisions that will support them to access pathways that best suit their needs and aspirations beyond school. Effective pathways also rely on a joint effort across schooling, vocational education and training (VET), higher education and business. This is not a new problem. There has been widespread acknowledgement of the challenges that young people face in senior secondary schooling and beyond. Indeed, a number of recent reviews seek to address different elements of the problem.

In recognition of the challenges facing young people, the Review to Achieve Educational Excellence in Australian Schools recommended an independent review of senior secondary schooling. The STEM Partnership Forum led by Australia's Chief Scientist Dr Alan Finkel noted the need to examine the impact of the Australian Tertiary Admission Rank (ATAR) and university prerequisites on student subject choices. The Higher Education Standards Panel has undertaken work to improve the transparency of Higher Education Admissions. The Expert Review of Australia's Vocational Education and Training System included a significant focus on clearer secondary school pathways. In addition, a number of states and territories are undertaking their own reviews of senior secondary arrangements. We will draw upon this knowledge.

However, it is vital that we do not contribute to the problem by continuing to view pathways through the same lens they have always been seen. We should not constrain reforms within a framework that does not allow young people the flexibility they require to move across and between education sectors within the new reality of life-long learning. We now have a chance to re-imagine how the transition from school to employment might look.

Recent research has proposed the need for a single tertiary education sector that calls for universal and affordable access to a quality tertiary education that is comprehensive, coherent and interconnected and that makes better use of both vocational and higher education (to the extent they can be differentiated). This type of tertiary education will need to respond to challenges facing our students, rather than being based on outdated demarcations between academic and vocational learning. This has the potential to impact significantly on current senior secondary entry requirements into tertiary education.

We now have a chance to look afresh at the challenges. All Australian education ministers, through the Council of Australian Government (COAG) Education Council have agreed to the Review of senior secondary pathways into work, further education and training (the Review) as one of eight national policy initiatives under the National School Reform Agreement.

The Review will seek to bring together the different elements and system level reviews. More importantly, it will put the experience of senior secondary students at the centre. As our future citizens and leaders, students must be better supported to make informed decisions about life beyond school, whatever pathways they choose to follow. It is important for them. But it is also vital to our future economic prosperity.

Terms of Reference

The terms of reference for the review ask the panel to provide the Education Council with advice and recommendations on how senior secondary students can better understand the decisions that they need to make to build the working lives to which they aspire. How can adolescents be enabled to choose the most appropriate pathways to support their transition into work, further education and/or training - or, increasingly, a combination of all three? In undertaking the Review the expert panel will give consideration to the particular challenges faced by disadvantaged students, including students with disability; those who live in regional, rural and remote areas; and those of Aboriginal and Torres Strait Islander backgrounds.

There are a range of focus areas relevant to the review. Without wishing in any way to limit discussion, the panel is focussed on five key questions:

1. What are the essential skills and knowledge with which young people should leave secondary school in order to enhance their lifetime career prospects whilst meeting Australia's future workforce needs? Whose job is it to make sure they acquire them?
2. Are current arrangements both in schools, at work, and in tertiary education supporting students to access the most appropriate pathways? Are routes sufficiently flexible to allow young people easily to change direction?
3. What are the barriers to allowing all students to have equal access to the pathways that are available?
4. What is being done well to help students make effective and well-informed choices? We wish to examine career education; different schooling models; vocational and work-related learning in schools; and industry-education partnerships.
5. How can we collect and disseminate the data we need to understand young peoples' choices and help governments to make informed public policy decisions?

Responding to the Discussion Paper

The expert panel is interested in hearing from a wide range of people, especially young people themselves. We want to find out how senior secondary students can be supported to better understand and select the most appropriate pathways to further study and/or work.

This discussion paper is designed to stimulate debate. It does not claim to cover the full range of issues impacting on senior secondary pathways. A complementary Background Paper has also been prepared. It provides a deeper dive into many of the issues, based on supporting evidence and research. We hope it will help to inform debate.

Please do not feel constrained by the panel's initial thoughts. We strongly encourage you to provide feedback on topics we have not captured explicitly. We do remind you, however, that the focus of the review is on pathways, and that the senior secondary curriculum is outside the scope of this review.

How do I provide feedback?

Go to www.pathwaysreview.edu.au to register for Review updates, find out more about the Review, and to provide your feedback on senior secondary pathways in Australia. Do not feel that you have to write a comprehensive submission: we welcome your thoughts on what concerns you most, particularly if they are informed by your lived experience.

Feedback can be provided using an online form available through the website.

Organisations may wish to upload feedback to the website in file form. However, any uploaded documents will need to meet accessibility requirements in order to be published. Further information is available on the website.

Feedback will be accepted until **7 December 2019** and will inform the Review's findings.

Why do we need a review?

The ways in which our senior secondary schooling system supports students to make informed decisions about how best to achieve their further study and work goals are critical. They have a significant impact on the contribution that young people will make to Australia as they grow into informed, engaged citizens.

Given the amount of work being undertaken on and around issues that relate to senior secondary pathways and the future of work, the panel intends to posit two provocative propositions to guide this discussion paper:

- 1) too many young people are making poorly informed post-school choices (through no fault of their own) that do not align with their skills, interests, and career aspirations; that involve unnecessary cost and time; and which may align poorly with Australia's future workforce needs; and
- 2) traditional ways of thinking about pathways need to be disrupted, with young people's choices no longer being unnecessarily constrained by the institutional perceptions of what they can and should do after school, and the certification that they require.

Recent research highlights the increasingly complex and dynamic working world young people will need to navigate. Understanding the link between the changing nature of work, the learning pathways available within schooling and the need to equip young people with skills for a range of pathways is essential if we are to give them the opportunity to succeed – not in the workforce as it was when their parents finished school, not as it is now, but as it will be in the future.

While there is debate around the veracity of claims that artificial intelligence will replace vast swathes of the labour market, there is growing consensus that machine learning and automation will have a profound impact on tasks undertaken within jobs and the types of skills that employers are seeking. The ability of humans to support and direct artificial intelligence will be increasingly prioritised over the more routine tasks that are being automated. This presents particular challenges for those entering the labour market for the first time. Many of the roles and tasks of entry-level positions may no longer be required. Many existing professional skills will be undermined.

It is clear that senior secondary students will need to be able to apply their knowledge in unknown and evolving circumstances. They will need to have the capacity to navigate increasingly complex pathways and unclear futures. Innovation, creativity and entrepreneurship are likely to become increasingly important in providing young people with opportunities to work as the pace of change increases. Whatever they study, they will need to develop the ability to keep on learning and adapting through their working lives.

The school system needs to support young people to make informed choices about learning pathways that avoid narrowing their options too early. It needs to keep them engaged to maximise their opportunities post-school. Young people need more support to locate and navigate the growing multiplicity of information to make these informed choices both within school and beyond. Traditional 'career' advice is unlikely to be sufficient.

The following pages seek to explore the key issues and problems facing senior secondary students as they seek to find a route through increasingly complex learning pathways. This review is an opportunity to take a fresh look at the fundamental assumptions and structures that our current system is based upon. It provides a chance to make recommendations to better support positive outcomes for young people, education systems and employers in Australia. Equally, the manner in which we help students choose the right career paths and education is crucial to meeting Australia's future workforce needs. Our ongoing prosperity depends upon it.

Skills

What are the essential skills, knowledge and capabilities students should expect to leave senior secondary schooling with to help them succeed in their post-school lives?

Establishing agreement and shared understanding across sectors of the essential skills, knowledge and capabilities with which students should leave school is a key area of focus for the review. What should be the minimum learning ‘entitlement’ for all students?

What do we know?

- There is contention around what key stakeholders (students, education systems and employers) expect young people to gain through their senior secondary schooling.
 - Many argue that there needs to be renewed effort to ensure that the basics of school education – literacy and numeracy – are transmitted to students before they leave.
 - At the same time, there seems to be a growing consensus about the type of workforce capabilities required, including innovation, collaboration, teamwork, creativity, interpersonal skills, communication skills, problem solving, and presentation skills.
 - Education systems and employers also tend to agree on the enhanced value of a wide range of additional capabilities, including enterprise skills, digital literacy, technical skills, critical and analytical skills, resilience, active citizenship, emotional intelligence and self-awareness.
 - Students themselves tend to emphasise the importance of factors relating to life-skills, self-care, and self-belief, while employers are particularly strong on the importance of work readiness and desirable workplace behaviours.
- The systemic shift toward school improvement appears to have led to an undue emphasis on academic outcomes, such as ATAR scores, rather than an overall view of what students have learned, know and can achieve as individuals. For example, the current presentation of the Senior Secondary Certificate of Education (SSCE) tends to outline only a student’s grades, rather than providing a broader picture of their skills, capabilities and maturity. A student’s workplace experience and community engagement may help provide a much better indication of their drive, resilience and developmental potential.
- Although literacy and numeracy skills are widely recognised as essential for success in learning and work performance, and most jurisdictions have minimum standards in place for obtaining a SSCE, there is continuing criticism from employers and tertiary education providers that senior secondary graduates are leaving school without adequate foundational skills.
- Students and employers have differing views on their preparedness to enter employment. While the majority of students feel they have good skills in areas such as team work, generating new ideas, and problem solving, many employers are concerned by the low levels of literacy, numeracy, and problem solving skills of school leavers in particular.

What are some ideas for change?

- Introduce mandatory, reportable minimum standards for literacy, numeracy, and digital literacy.
- Balance the emphasis on academic skills with an equal emphasis on broader skills obtained through community engagement, work related learning, team-based sports, volunteering and activities undertaken outside the school gate.
- Skills and capabilities not related to academic achievement should be reported on, giving students a better sense of the variety of achievements that help build their future capacity.

- Students might leave school with a ‘learning passport’ detailing the essential skills, knowledge and capabilities they have gained. This could follow them through further education and employment, and reinforce learning as a lifelong process. As they develop their careers the ‘passport’ could include the workplace experience, professional courses and micro-credentialing that they acquire.

Key questions

- What does success at the end of year 12 look like for students, for education systems, for industry, and the community?
- What are the foundational skills essential for all students for all pathways, including further study, employment or starting a business?
- What are the learning attributes necessary to prepare students for the future of work in a world of digital communication, robotic process automation, machine learning and cognitive technologies?

Selection

How can we help students make better decisions about learning pathways within school?

The old ways of thinking about pathways are facing major disruption. Linear pathways through learning journeys are less common. Students need to make increasingly complex decisions before they even enter senior secondary schooling. Understanding how students select pathways and ensuring they do not narrow their options too early is key to equipping young people for lifelong learning in a fast-changing economy.

In many ways Australia’s educational and training system is more flexible than ever before, allowing people to change direction or acquire further education and training as they mature. Yet this is often unrecognised, with young people believing that a poor decision at school will cut off their future opportunities. Often this can result in adolescents facing extreme pressure and psychological distress.

What do we know?

- Young people’s engagement with learning pathways may include repeated cycles of engagement, disengagement, and re-engagement with a diversity of sectors and providers at different points in their lives.
- Subjects studied in the senior secondary years have significant influence on the educational and career options available to young people after they leave school.
- Choices can be limited by issues such as school size, location, parental influence, lack of informed career education, timetabling and specialist teacher availability.
- Arguably, the current construction of SSCEs and tertiary entry requirements are clearest for students pursuing an academic post-school pathway. This can lead students to make study choices that are not in line with their interests, skills or aspirations.
- Students may be persuaded to choose subjects to maximise their ATAR scores rather than selecting subjects that provide them with the skills and knowledge needed to achieve their goals. This has a particularly strong impact on STEM subjects such as advanced mathematics and science.
- Courses that incorporate work related learning, opportunities for industry and community engagement and career education are offered in many jurisdictions. While these courses may be beneficial, they often do not count towards the SSCE. Too often they are perceived to be of ‘lower’ status.

- There are significant data gaps that impact on our understanding of senior secondary pathways. None of the existing national data collections taken on their own provide a clear picture of the senior secondary pathways landscape, and there are limited connections between datasets. As a consequence we do not know how, when and on what basis young people are making education and employment decisions.
- Students often feel that the decisions they make early, and the structural gateways imposed on them by education systems, commit them to particular pathways. They feel unable to change. They fail to make use of the opportunities available.
- The transition from school to the workforce can be viewed as a series of decisions made by young people, starting well before senior secondary schooling, regarding what they want and how they will achieve their goals. We need to help students make 'good' decisions but also let them understand that 'poor' decisions will not need to determine their future prospects.

What are some ideas for change?

- Create clear linkages between senior secondary subject choices, tertiary or other educational options, and career outcomes.
- Create a flexible model for SSCEs which allows senior secondary students to undertake micro-credentials and work related learning and have them count towards the SSCE, ATAR, or end-of-school assessment.
- Build multiple review points into models of schooling, particularly leading into SSCE attainment, to allow students to change or divert from particular pathways and specialisations.

Key questions

- How can students be supported in the earlier years of school to understand the links between their interests and skills, subject choices and post-school pathways and avoid narrowing their options?
- Is it possible for schools to count other flexible delivery options towards the SSCE and/or ATAR?
- What new or different data would help provide a fuller picture of senior secondary pathways? How would that support students to make informed choices and governments to make better public policy decisions?
- How can schools better connect and inform parents about the value of all pathways?

Sentiment

How do we change negative perceptions of certain pathways?

There is a persistent tendency for different pathways to be viewed as more or less prestigious. This can have serious consequences for students when they are selecting subjects and deciding on pathways in school. It also presents a longer-term challenge for re-skilling, with young people likely to need to move between and across education sectors to gain different qualifications and micro-credentials throughout a lifelong learning journey.

Although the impact of cognitive technology is unclear, it is likely that many of the 'professional' tasks will increasingly be undermined by data analytics and machine-learning, whilst many 'trade' skills will become increasingly sophisticated and computer-driven. The distinction between 'higher' and 'vocational' education is likely to become less meaningful. More and more workers will need the capacity to keep on learning throughout their careers.

What do we know?

- Many parents and students view the academic pathway that leads to university as prestigious and valuable, when compared to pathways that include VET, work or non-traditional study.

- Over the last decade, there has been an increase in the number of young people entering higher education, while VET in schools enrolments have plateaued and apprenticeships/traineeships have fallen.
- There are concerns over the quality and outcomes of VET delivered to secondary students, including a lack of value by industry, and inconsistent approaches toward competency-based quality assurance. Whether this is the reality or not, these concerns represent a reputational risk to the sector.
- The perceived lack of prestige can unfairly stigmatise young people undertaking vocational qualifications, and lead them to pursue an academic pathway even when it is not their preference.
- Students who pursue a pure higher education pathway based on perceived prestige may spend increased time and money on study that is not aligned to their skills or aspirations.
- Funding models with high upfront student contributions may influence decisions over a students' skills or aspirations, rather than reflect their passions or interests.
- There is limited understanding among parents and career advisers of the increasingly diverse ways to attain post-school qualifications, the different cost structures across sectors, and the time required to complete them. Non-linear pathways that cut across sectors often provide greater benefits than traditional, single sector pathways.
- Including micro-credentialing (certification of assessed skills and knowledge, which may be additional to, complementary to, or a component part of a formal qualification) within a pathway can offer numerous benefits. Such courses can flexibly address specific work or learning needs relating to identified careers.
- Blending employment with study can also be beneficial, with some research finding working around five hours per week has a positive impact on post-school full-time employment.
- Although non-traditional pathways are generally viewed less favourably, students who are not following a linear pathway could be taking a gap year, attempting to start their own business, taking on caring responsibilities or be disengaged. Importantly, many students engage, disengage and re-engage with different pathways throughout their life.
- Educational attainment affects both labour force participation and earning potential, with higher levels producing better outcomes. However, some metrics suggest that attaining a Certificate III or IV leads to the same, or better, results as a Diploma, Advanced Diploma or Bachelor Degree. We need better information (and students need clearer advice) on the lifetime earnings benefit of different educational and training pathways.

What are some ideas for change?

- Focus on helping students, whatever their particular interest, to develop a capacity to study and learn for employment in an uncertain future.
- Coordinating stakeholders to provide clear, unbiased, aligned information with targeted messaging that is able to be accessed by parents, carers, schools and students.
- Commissioning research to investigate the individual and societal benefits of undertaking different pathways, including non-linear pathways.

Key questions

- How can we change perceptions toward the full range of available pathways?
- How can we expand our thinking to embrace non-traditional or currently not undertaken pathways?
- Is a single tertiary education sector with equitable funding that blends both VET and higher education possible or desirable?

Support

How can we support young people to make better decisions about their post-school pathways?

Students often start senior secondary schooling with little understanding about the pathways available to them. With parents/carers the biggest source of career advice for young people, it is crucial that students, caregivers, parents and those who provide career advice are better informed not just about today's labour market, but, more importantly, have an understanding of the future of work over the next 30 years.

What do we know?

- Students have a much better understanding of the university pathway than they do of other pathways such as VET, apprenticeships and traineeships.
- Many young people feel they do not have the information they need to set and meet their post-school goals. They do not know who has that information.
- There is little information made available to students regarding non-traditional pathway options, such as entrepreneurship, micro-credentials or work related learning or blended pathways across both the VET and higher education sectors.
- Most young people get their career advice from parents or caregivers, followed by the internet, their friends, and teachers. Often that advice is not well-informed, given that it is based on outdated information and assumptions.
- The career education provided by many senior secondary schools is limited in scope, and may not be delivered by advisors who know and understand the student's skills and aspirations or the current post-school landscape.
- Although there are many websites available to provide information to young people, they can often be difficult to navigate due to a lack of linkages.
- Not providing good information about the best pathway to pursue may result in students taking longer to complete qualifications, and potentially incurring large debts from misguided or unnecessary study or wasting time on a pathway that doesn't lead them to the successful or positive outcome for which they hoped.

What are some ideas for change?

- Consider assigning each senior secondary student an advisor who knows the student well, and is able to investigate career options specifically tailored to that student.
- Introduce micro-credentialing options to senior secondary school, to allow students to demonstrate (to themselves and to future education providers or employers) their aptitude or learning achievements relating to specialisations. These could count toward the SSCE, recognition of prior learning, or work related skill competencies.
- Create a single online platform that becomes the main source of information to support young people making decisions. This would have tools that help young people identify 'what do I like, and what am I good at?', and then build on that to show future pathways and career options. It could also include relevant courses across VET and higher education, and information about likely job availability, the cost of courses and financing options, future potential income and other information young people need to help them make good decisions.
- Create school-based business incubators to support start-up aspirations for business and social entrepreneurs.

Key questions

- How can we ensure all pathways are equally understood and promoted to students?
- Is there a better model of career information and career advice that could be implemented?
- What is the most effective way to provide transparent, easy to access, useful information?
- How do schools make better connections with parents and industry to facilitate informed advice?

Support for all students

How can we make sure opportunities are available and support is tailored to the needs of all young people?

It is essential that senior secondary schooling supports the participation of all students, and provides tailored support to disadvantaged groups such as Aboriginal and Torres Strait Islander peoples; people with disability or low socio-economic status; those from regional, rural, remote or very remote locations; early school leavers; those from linguistically diverse backgrounds, and refugees.

What do we know?

- Students from disadvantaged groups are more likely to disengage from school during or prior to the senior secondary years. Choosing to leave school early does not close off all options for gaining year 12 certification or an equivalent, but this is not always obvious to the student. Young people need to receive help to 're-enter' education or training rather than feeling that they have lost their opportunity.
- While there are a range of support structures in place to support disadvantaged students once they have accessed further education and training, the challenge is to ensure these students are supported to understand all the available options and what they need to do to access them.
- Disadvantaged groups face particular challenges in making decisions around their future pathways, and ultimately experiencing successful transitions.
- Outcomes of educational disadvantage can include poor engagement at school; low educational qualifications; low levels of participation in post-school education, training and employment; and low participation in the labour market.
- Representation of disadvantaged students in education declines following compulsory schooling, with few represented in VET, and even fewer in higher education (although participation in higher education by all equity groups has grown following the demand-driven system of the last decade).
- Higher education retention rates for many disadvantaged groups remains lower than that of their undergraduate peers. Importantly, however, disadvantaged students who do graduate from higher education often have similar or better employment outcomes than their non-disadvantaged peers. Education and training remains the pathway to economic opportunity and social mobility.
- Post-school participation and success in VET for disadvantaged students can be uneven, and with the exception of remote and regional students, disadvantaged VET graduates improve their employment status to a lesser extent than VET graduates overall.
- Student engagement and wellbeing are a precursor to achievement. Schools that engage well with students have flexible models that look at the needs of each individual student and what their interests are.

What are some ideas for change?

- Many institutions have developed a range of alternative pathways to attract school leavers who may be able to demonstrate their readiness and capacity through means other than ATAR.
- Enhance student identification with schooling outcomes by making them relevant, meaningful and connected to real-world outcomes.
- Provide quality access to employment networks, career advice, and positive role models.
- Make schooling more engaging and relevant to circumvent potential disengagement.
- Provide access to 'wellbeing hubs' for students at risk of disengagement so they can access relevant support.

Key Questions

- What are the challenges faced by different groups of students in understanding and accessing the full range of pathways?
- Are there specific approaches that could be implemented to reduce or remove these barriers?
- How do we ensure young people at risk of disengagement have access to relevant support services?