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The Australian Senior Certificates: after 50 years of reforms

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Abstract

This article maps current senior secondary certification arrangements in Australia, drawing on data on school completion rates, certificate attainment and post-school destinations, as well as policy documents within and across jurisdictions. It argues that irrespective of the jurisdiction, numerous changes over nearly 50 years to the rules governing the senior certificates have been principally responses to the original and continuing need to prepare young people for university and the more recent need to cater for near universal participation in the senior secondary years. It argues there is no consistent and shared view of the purpose of the senior secondary certificates, no consistent approaches to dealing with disadvantage, and continuing difficulties in meeting the needs of the full range of young people in the senior years, particularly those from regional and remote areas, Indigenous communities and low socio-economic status students. There is also considerable variability in retention rates and rates of attainment of the senior secondary certificates as well as the calculation of the Australian Admissions Tertiary Rank (ATAR) score which was primarily designed for university selection purposes. The certificates also have limited emphasis on capabilities in their design and considerable variation in the manner in which literacy and numeracy minimum standards are defined, set and assessed. Furthermore, there is no consistent approach regarding compulsory subjects or a core curriculum, the design and implementation of VET courses and the evolving role of the ATAR.

Keywords Australian curriculum · Secondary education · Senior secondary certificate · Senior secondary curriculum · Senior secondary assessment

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Introduction

The senior secondary certificates of education offered in the various states and territories of Australia celebrate and accredit the knowledge and skills of young people graduating from secondary school. Much like the high school diploma in the United States and the General Certificate of Education (GCE) A-Levels in the United Kingdom, they recognise and, in most cases, assist in calibrating achievement for the purposes of directing and assisting young people entering various pathways to further learning, employment and participation in society. As such, they play a crucial role in structuring the pathways of young people, creating (and denying) opportunities according to their efficacy for different groups.

This article maps current senior secondary education certification approaches in Australia, drawing on data on school completion rates, certificate attainment, achievement data and post-school destinations, as well as policy documents. It considers whether these certificates are fit for purpose in an age of changing labour markets, rapid growth in higher education enrolments and continuing inequality of outcomes. It also documents the current status of implementation and integration of the national curriculum, and maps current senior secondary assessment arrangements, highlighting key commonalities and differences. It finishes by considering these issues in the light of the *Review to Achieve Educational Excellence in Australian Schools* (Gonski et al. 2018) which notes the crucial importance of the general capabilities needed by students to adapt to a complex and rapidly changing world and workplace.

A history of contestation

Historically, the role of upper secondary education in structuring the opportunities of young people has been well documented, for example in Baudelot and Establet's (1971) thesis that most systems of secondary schooling consist of two distinct tracks—one bound for university and one for a direct entry to the labour market. Bourdieu and Passeron (1977) articulated the ways in which the cultural capital of young people is mediated by secondary schools through processes such as tracking, curriculum options and subject hierarchies, while Goodson (1983) focussed on the unequal capacities of students from different social backgrounds to access different levels of the secondary school curriculum hierarchy.

In the pages of this journal, a number of debates have focussed on these issues. Ingram et al. (2018) noted the use of curriculum hierarchies, including vocational studies, as "tactical behaviours" (p. 548). These are designed to improve the standing of schools in performance tables, although, as they noted in their conclusion, not always to the benefit of the students. Similarly, in the Australian context, Polesel and Keating (2011) questioned the efficacy of alternative senior secondary qualifications and curricula in meeting arbitrary government targets for school completion.

We begin our discussion of the Australian system by observing that its senior secondary certificates command considerable respect locally and internationally, with most able to be offered by registered international providers and all recognised for entry to international universities, subject to additional requirements. Within Australia, the senior secondary certificates have been integrated with university selection though the Australian Tertiary Admissions Rank (ATAR) where externally moderated subjects within the senior secondary certificates are scaled to adjust for differences in difficulty between subjects to calculate a score that ranks students within and across jurisdictions. Unlike other countries (e.g. USA), there are no entrance examinations designed or administered by the universities for selection purposes. Instead, the ATAR score is the sole mechanism for selection into most university courses, particularly those courses where there are high demands and limited places.

However, contestation over the curriculum of the senior secondary years, methods of assessment and reporting as well as the control exercised by the universities over the curriculum have historically been a concern in all the states and territories. Numerous reviews in every jurisdiction over the last 50 years (e.g. Dettman 1969; Kirby 2000; McGaw 1997; Pitman and Herschell 2002 among others) have focussed on three main themes. Firstly, there has been concern regarding the appropriateness of a curriculum and assessment regime designed originally to meet the needs of universities for selection of candidates and its impact on the range of studies, pedagogical practices and assessment approaches available to young people, in particular those not intending to go to university. Secondly, there has been a concern that the curricula and their associated assessment requirements do not adequately report the achievements of students not intending to go to university, especially in terms of certifying the broader competencies and capabilities required by the labour market and employers. Thirdly, there is a fear that such curricula do not engage the range of learners now required or wanting to stay on until the final years of schooling, with the possible deleterious effects of this on school completion rates. These themes reflect a tension between the original and continuing need to prepare young people for university and the more recent need to cater for near universal participation in the senior secondary years.

Reforms arising from these reviews have ranged from changes to the names and composition of the awarding bodies (variously Boards and Authorities), changes to the rules governing accepted curriculum, the relative roles of school-based assessment and external examinations, processes of moderation to bring standards into alignment, methods governing university entry and calculating the ATAR and finally, a more recent focus on competencies and capabilities, including literacy, numeracy, enterprise skills, life skills and careers skills.

They have also included the development of alternative curricula that have manifested in a system of separate subjects and/or separate certificates. On the one hand, these have comprised subjects in the traditional disciplines (e.g. maths, sciences, humanities and languages) with significant components of external assessment and favourable scaling practices. On the other hand, they have comprised alternative certificates (as is still the case in the state of Victoria), or a second tier of solely internally-assessed subjects (i.e. school-based) that do not contribute to the calculation of

the Australian Tertiary Admissions Rank (ATAR), or vocational subjects which may or may not contribute to the ATAR, or subjects in the newer disciplines (e.g. Health and Human Development) which may use a combination of internal and external assessments and contribute to ATAR but can disadvantage students by the scaling practices used.

While these options have increased diversity and choice within the certificates and seem to have played a key role in engagement and retention, they have also been poorly understood and strongly opposed in sections of the community and have generated concerns that they lack rigour. Historically, these concerns have emanated from universities (Penington 1989), conservative and media commentators (Donnelly 1989), or politicians (Hayward 1990), while more recently, employers have called for greater work readiness, communication skills, problem-solving and collaborative skills among school leavers (NSW Business Chamber 2017). There is also evidence that they have contributed to social selection, effectively quarantining the university track of the senior certificates as a mechanism for the more privileged to enter university while relegating lower socio-economic status students to the alternative subjects or certificates (Teese and Polesel 2003).

Retention and engagement

The related issues of retention and engagement have underpinned many of these curriculum debates, with some jurisdictions struggling to meet the needs of the range of young people in the senior years, particularly those from regional and remote areas, Indigenous communities and low socio-economic status students (Polesel et al. 2013). Outcomes for different groups and different regions, measured on a variety of scales, vary considerably.

The need to increase retention was central to the earliest initiatives to reform the senior secondary education certificates in Australia. However, measuring the impact of changes in senior secondary certificate offerings on retention is a difficult task.[1] At a glance, retention in Australia seems to show little correlation with curriculum change at key points in history. While there was rapid growth from the mid-1980s until 1992, stagnation characterised the following 20 years, with the rate subsequently creeping from 77.1% in 1992 to 79.9% in 2012. In the following five years, this increased to the current rate of 84.8% in 2017. However, rates across the states and territories vary considerably from this national average, ranging from lows of 58.6% in Northern Territory and 71.5% in Tasmania, to highs of 94.7% in South Australia and 94.8% in the Australian Capital Territory. The increase in retention rates from 2010 onwards may partly be due to the Australian Government's 2009 Compact with Young Australians (Australian Government 2009), which aimed to increase engagement with education and training through:

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[1] Apparent retention rates can be impacted by a range of factors specific to the jurisdiction other than curriculum and certificates, e.g. population change (interstate migration), socio-economic status, remoteness, Indigenous population, sector mix.

- Changes to the school leaving age, which required young people to participate in schooling until they completed Year 10 or an approved equivalent and then to undertake at least 25 h per week of education, training or employment (or a combination of these) until age 17;
- Changes to Youth Allowance, which required those under 21 without a Year 12 certificate to undertake at least 25 h of study or training per week to qualify for income support; and
- Entitlement to government-funded training for all young Australians.

Other national policy initiatives that may have affected changes in retention rates include the introduction of the National Indigenous Reform Agreement (Council of Australian Governments [COAG] 2007) aimed at closing the gap for Indigenous people in Year 12 attainment and the National Partnership Agreement on Low Socio-Economic Status School Communities (COAG 2008), aimed at increasing Year 12 completion rates for young Indigenous and low SES people. Wider economic conditions—including significant events like the 2008 Global Financial Crisis—have also influenced retention rates.

Similar gaps are evident in rates of students eligible to receive an ATAR score, a requirement for entry into many (although not all) university programs in Australia. Eligibility is dependent upon completion of a suite of subjects with an external assessment and/or moderation component. While the proportion of the Year 12 cohort receiving an ATAR averages at 53% across Australia, it varies from 28% in the Northern Territory to 61% in Victoria (Ramsay and Rowan 2017).

With respect to transitions from school, there is evidence that less than half of the graduating cohort now enters university, although it is lower in some states and higher in others. Significant proportions of graduates from all the states and territories seem to be making a direct entry into the labour market without further education or training (between approximately 20 and 40%) (ACT Government 2016; Australian Bureau of Statistics [ABS] 2014; Department of Education and Training Victoria 2015; Productivity Commission 2018; Queensland Government 2017; Social Research Centre 2016). Given that this group is predominantly composed of young people who are unemployed, working in part-time, low skilled and low paid work or not in the labour market at all, this is concerning for young Australians and the community. The outcomes for early school leavers are even worse, with most making a direct entry to a labour market characterised by low paid, low skilled, casual and part-time jobs (Polesel et al. 2013; Lamb and Huo 2017).

Assessment

Processes of assessment have remained among the most contested elements of the certificates. Baird et al. (2013), in the English context, have pointed to concerns regarding the validity and rigour of assessment in the UK's GCSE and these are reflected in the on-going Australian debates. Historically, norm referenced frameworks have been the predominant means of interpreting students' performances in settings where the only requirement for such comparison was to rank order

performances in terms of increasing proficiency (Gillis and Griffin 2008). However, as the rank ordering does not provide any indication of knowledge and skills acquired by the individual, it cannot serve a formative function or be used to monitor growth or benchmarks across time, and most senior secondary education programs across Australia have now implemented some form of a standard referenced approach as part of the assessment process, allowing students' performances to be compared with descriptions of knowledge and skills ordered along a learning progression and grouped into stages. This allows rank ordering of students for selection purposes, but unlike norm referencing, the rank ordering has meaning in that marks allocated can be directly linked to the knowledge and skills demonstrated by the student and therefore can serve diagnostic, formative, summative and selection purposes.

The addition of school-based assessment to external examinations is also a major reform of the last 50 years and is now the prevalent model used to assess students' performances in subjects that are designed to contribute toward the calculation of ATAR. This means that subject specific exams are used in combination with school-based assessments to contribute to the students' final results in the senior secondary certificate as well as in the calculation of the ATAR.

As all jurisdictions have a component of school-based assessments contributing toward the calculation of students' results, a range of moderation processes (i.e. social, external and/or statistical) are implemented to bring judgements, scores and standards of different teachers and schools into alignment. In some jurisdictions, social moderation at the school level may also be supplemented with external moderation where an external panel (which is independent of the school and represents the relevant Board of Studies) reviews samples of students' work, assessment tasks, scoring rubrics, marking guides and assessment decisions. Where necessary, adjustments are made to the students' results to bring standards into alignment within that state or territory. For example, Queensland abolished the use of external examinations in its senior secondary education system in the 1970s in favour of a decentralised assessment system in which schools had the autonomy to design and judge students' work using a standard referenced approach to assessment and reporting and in accordance with the specific requirements specified within the relevant syllabus. Such school-based assessments were quality controlled through district and state-level external moderation panels that were subject specific, comprising volunteered teachers with recognised disciplinary and pedagogical expertise as panel members (Maxwell 2001, 2007). However, in response to increasing concerns with the rigour of external moderation by key stakeholder groups, external assessments were re-introduced in the QCE in 2020, after more than 40 years of absence, to supplement the school-based assessments (Matters and Masters 2014).

In other jurisdictions, such as Victoria, New South Wales and Tasmania, the external examination is used to statistically moderate the school-based assessments. Statistical moderation entails adjusting the level and spread of each school's assessments of its students in a particular course, to match the level and spread of the same students' scores on a common external task (whether that be a course specific exam or a generic aptitude type test). The major benefit of statistical moderation is that it provides the strongest form of quality control over school-based assessments.

The continuing need for a balance between external and school-based assessment reflects the continuing need for the senior certificates to report the broader achievements of all students, while also providing a fair and transparent basis for the calculation of the Australian Tertiary Admissions Rank (ATAR).

The Australian Tertiary Admissions Rank

The Australian Tertiary Admissions Rank (ATAR) is the primary criterion used by universities in Australia to select applicants, particularly in high demand courses. It is a nationally comparable percentile ranking ranging between 0 and 99.95 with 0.05 increments. It reflects a student's relative ranking to their 'theoretical' student cohort (that is, all students who started year 7 with the students 5 years earlier). Using a method agreed at a national level, each jurisdiction is responsible for calculating an eligible student's rank against all other students within their jurisdiction by applying a scaling process that recognises that some subjects attract more academically able students than others. The scaling process is undertaken by statisticians independent to the awarding bodies within the school sector and the statistical process applied to determine eligible students' ranking differs slightly between states and territories. For example, in Victoria, NSW and Tasmania, eligibility is dependent upon students undertaking subjects that have an external examination component. In each of these three states, the following sequential process is undertaken to produce the ATAR:

1. School-based assessments are socially moderated at the local level. This enables students to be ranked within a subject within a school.
2. The subject specific external examination (designed, scored and administered by the awarding body) is then used to statistically moderate the school-based assessments to bring standards into alignment across schools.
3. The statistically moderated school-based assessment and examination results are then combined to produce an overall subject assessment result. This result enables students to be ranked within the subject.
4. The subject assessments are then used to produce an ATAR score.

There are also other pathways into tertiary education for school leavers. A recent paper (Pilcher and Torii 2018) suggests that 60% of undergraduate university offers were made on the basis of entry criteria *other* than the ATAR. However, the data reported did not discriminate between recent school leaver applicants and other (mostly older) applicants, an important distinction since the proportion of recent school leaver applicants would be more likely to use ATAR than other applicants. Nor did it report differences between universities, courses or states and territories. This makes it difficult to assess accurately the role that ATAR currently plays. A similar claim is made in the 2016 Higher Education Standards Panel report (Shergold 2016), which states that 69% of all admissions (including post-graduate) did not make use of the ATAR. Again, the reality for school leaver applicants is different, as the same report indicates that if we

consider those admissions from applicants with secondary education only (a better match to the recent school leaver cohort) the proportion being admitted using ATAR rises to 70% (Shergold 2016).

All jurisdictions continue to calculate and allocate ATARs to eligible school completers, and universities continue to use an ATAR to help them select applicants, although some universities also use other criteria (e.g. personal statements, portfolio, audition, interview) for specific courses (e.g. medicine) (McCurry 2013). It is evident that the weighting given to the ATAR in the process varies considerably according to the university, the course and to a lesser extent, the situation of the applicant. We would suggest that the ATAR continues to play a significant role in entry to high demand undergraduate courses for school leaver applicants, particularly where limited course capacity coincides with large numbers of applicants.

Vocational education and training

Various national reviews during the 1990s (e.g. Finn 1991; Mayer 1992) and growing concerns from the business community that young people were not being adequately prepared for work led to increasing support for the introduction and/or expansion of VET for students in secondary schools. The gradual expansion of nationally accredited vocational curricula into secondary schools across Australia in the mid-1990s took place through state-based arrangements to offer vocational subjects, originally known as Dual Recognition or VET in Schools subjects, through the senior certificates. The role of VET within the senior certificates varies across the states and territories. Differences across the jurisdictions include the assessment methods employed and their degree of standardisation to generate an overall subject result and/or contribute to the ATAR, and the requirement for work placements. All states and territories except Western Australia allow students to include VET subjects into the calculation of the ATAR.

There is evidence that VET can play an important role, internationally and in Australia, in catering for young people from lower socio-economic status backgrounds, but also that it can operate as a mechanism of social selection (Benadusi 2007; Young 2007). For VET delivered to secondary students, the situation is similar and there is considerable evidence in the Australian context that the socio-economic status of students affects their likelihood of enrolling in VET (e.g. Polesel 2008), with lower socio-economic status students more likely to enrol than higher socio-economic status students.

The efficacy of VET delivered to secondary students in Australia, in terms of outcomes and pathways to work, has been questioned (Polesel 2008). Recent Australasian Curriculum, Assessment and Certification Authorities (ACACA) (2015) research has suggested that the majority of enrolments in VET in schools may be considered pre-vocational or entry-level, an issue also noted by Polesel (2008). This is a problem because they neither provide work-ready employees nor provide significant theoretical content equivalent to the level of senior certificate subjects.

The national context

In the context of a federal system, two main issues emerge. One has been the impetus for a national curriculum and for a national certificate of senior secondary education (i.e. the mooted Australian Certificate of Education). The second has been the introduction of International Baccalaureate programs, taken by a small proportion of students as an alternative to their state/territory based senior certificate.

The issue of a national curriculum and, more specifically, a national senior secondary curriculum and associated certification has been mooted for many years. In 2003, it was discussed by the Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA), leading to discussion of the concept of an "Australian Certificate of Education" (ACER 2006, p. i). In 2006, the Australian Council for Educational Research (ACER) (2006), in a report commissioned by the Australian government, recommended the replacement of the nine existing state and territory senior certificates by a single national Australian Certificate of Education, but this has been resisted by the states and territories. The rationale for this recommendation included the need for curriculum breadth, participation and engagement for all, a multi-purpose certificate (encompassing preparation for university, vocational education and employment), high standards and quality, and the recognition of generic capabilities and skills such as employability skills, literacy, numeracy and ICT literacy. As our overview of the senior secondary certificates across the states and territories has shown, some but not all of the elements of this rationale are stated in the aims of the existing senior certificates. This points to significant commonalities but does not necessarily ensure quality and consistency. The most notable exceptions in stated aims are, perhaps, the broader capabilities and competencies, which seem to vary considerably from jurisdiction to jurisdiction.

The Australian Curriculum, Assessment and Reporting Authority (ACARA) was established in 2008 in response to a need for greater national cooperation and consistency in approaches to certification and reporting and, in 2009, the council of Commonwealth and state and territory education ministers approved the first version of *The Shape of the Australian Curriculum*, a document to guide the development of an Australian Curriculum. Based on the principles of the Melbourne Declaration (MCEETYA 2008), emphasising knowledge, skills, the learning areas, general capabilities and cross-curriculum priorities, the document has evolved over various iterations (ACARA 2013a). This and various other documents (ACARA 2012, 2013b) have informed the process for the development of an Australian curriculum.

In terms of the development of a national curriculum across the Foundation-Year 10 years, extensive consultation, development and planning led to the endorsement in 2015 of an Australian Curriculum in the areas of: English; Mathematics; Science; Humanities and Social Sciences; The Arts; Technologies, Health and Physical Education; and 11 languages. A further optional subject for Years 9–10—Work Studies—was also endorsed.

At the senior secondary level, progress has been slower. Extensive consultation involving Commonwealth and state and territory bodies over the period 2011–2012 has resulted in 15 senior secondary subjects in English, Mathematics,

Science, History and Geography being endorsed by the council of federal, state and territory education ministers as the agreed base for developing senior certificate courses. The senior secondary Australian Curriculum specifies content and achievement standards in the subject areas. However, the ACARA Australian Curriculum site (see https://acara.edu.au/) notes the responsibilities which remain in the realm of the states and territories:

> State and territory curriculum, assessment and certification authorities are responsible for determining how the Australian Curriculum content and achievement standards are to be integrated into their courses. The state and territory authorities also determine assessment and certification specifications for their courses and any additional information, guidelines and rules to satisfy local requirements, including advice on entry and exit points and credit for completed study.

ACARA's most recent update of progress and timelines for implementation of the integration process, achievement standards and English and mathematics curricula (ACARA 2014) shows that most jurisdictions are using the term "existing processes" to describe their approaches to planning and reviewing the integration of Australian curriculum in their senior certificates, which seems to indicate the maintenance of existing structures. The exceptions are Western Australia and the Australian Capital Territory (ACT), which seem to have made the most progress in this area.

With respect to achievement standards, these have shown even less movement, with the two largest states (i.e. Victoria and "New South Wales (NSW)") indicating no change, and only the ACT agreeing to integrate the achievement standards. With respect to English and mathematics, the ACT and Western Australia have integrated the Australian curriculum in most of the associated studies in these two areas, and South Australia (and Northern Territory (NT)) were in the process of reorganising the content in both areas. Tasmania had also made some amendments to accommodate aspects of the curriculum. No changes were reported in the remaining states and territories, and no further reporting of progress is outlined in the Boards of Studies' websites in the jurisdictions, other than general statements of compatibility with Australian Curriculum guidelines.

The reasons for this lack of progress are not difficult to establish. To begin, it is a constitutional fact that the states and territories have responsibility for the delivery of education and the curriculum. Harris-Hart (2010) argued that the barriers ACARA has faced in implementing a national curriculum relate to the process being perceived as less a form of co-operative federalism than "coercive federalism". Brennan (2011 p. 275) was more positive, noting that the time has come for a national curriculum but that this requires deep engagement with teachers and the educational community to ensure that curriculum reform addresses issues of inequality and vastly different levels of achievement amongst different student groups. Savage (2016) characterised the problem as "policy overlap and blurred lines of responsibility" (p. 833) between the Commonwealth and the states and territories, while others have claimed that opposition to an Australian curriculum stems from a view that Commonwealth involvement is driven by a neo-liberal

economic and accountability agenda rather than educational motives (Ditchburn 2012).

In the absence of enthusiasm to implement a national certificate of senior secondary education, it is notable that an internationally recognised program has gained some traction in recent years in Australia. The International Baccalaureate Diploma Program (IBDP) is a program intended for students aged 16–19 years old as a pathway to university and employment. The International Baccalaureate (IB) was established in Switzerland in 1968 and has been taught in Australia since 1978. There are currently 187 schools in Australia offering one or more of the four IB programs. In the senior secondary space, there are 72 schools in Australia (i.e. 15 government and 57 private) offering the IBDP and in 2017 there were 2408 students in Australia undertaking IBDP subject examinations. However, this represents less than 1% of the 236,575 Year 12 students in 2017. In Victoria there were 676 candidates, 552 in Queensland, 547 in NSW, 398 in South Australia, 134 in the ACT, 46 in Western Australia, 40 in Tasmania and 25 in the Northern Territory. In 2017, the average Australian IB student result of 34 out of 45 was equivalent to an ATAR of 92 (International Baccalaureate 2018). Its strengths are seen as its "global nature, which encompasses academic breadth; open-ended inquiry; community involvement; focus on personal development, and the compulsory inclusion of a foreign language" (Ricci 2015: n.p.).

In general, IBDP students are excluded from merit ranks created by media organisations based on State or National senior secondary courses such as the NSW HSC or Victorian VCE, because IB Diploma graduates' results are unavailable until early January. As a result, such merit ranks may be an inaccurate reflection of academic performance of school cohorts, especially given the preponderance of high achievers in the smaller cohorts undertaking IBDP studies. With some schools having up to 70% of their cohorts completing the IB Diploma rather than the state or territory curricula the distortion of merit ranks excluding IB Diploma results may be affecting their overall academic rankings within their states (IB Schools Australia 2017).

Research conducted by ACER for the International Baccalaureate Organisation to investigate universities' views of the IB, comparing the IBDP with the other certificates in Australia and New Zealand (Coates et al. 2007), suggested that the IB Diploma was viewed as providing a university preparation that is as good as, and in nearly all instances, better than that of the state certificates or other international certificates, especially in terms of breadth and depth, an internationalised educational experience, and greater emphasis on community engagement. Despite such views, university staff also reported a general view that Australian state/territory-based certificates should be supported, and that promotion of the IB might diminish support for a pathway they should be working to enhance.

ACARA (2017a; b) recognises the International Baccalaureate (Primary Years Program and Middle Years Program) and has placed them on its recognition register, but it does not specifically endorse the Diploma Program, as this is not its role. Universities already accept the IBDP for entry purposes and there is an accepted process for converting IBDP scores to an ATAR equivalent. A recent analysis (Dixon et al. 2014) of the IBDP against the aims expressed in the Melbourne Declaration for a national curriculum also noted the strengths (and some advantages of

the IBDP) but argued that in some areas the DP curriculum may fail to align with the Australian Curriculum (AC), especially in relation to the emphasis in the AC on Australian Indigenous history and communities as well as Australian government structures. The authors also argued that while these gaps are apparent in the document analysis, these elements are also often absent in the enacted senior certificate curriculum in Australian schools.

The policy aims of the certificates

An important contextual element of this analysis is the *Review to Achieve Educational Excellence in Australian Schools* (Gonski et al. 2018) which noted the crucial importance of the general capabilities needed by students to adapt to a complex and rapidly changing world and workplace, which require "skills that are not easily replicated by machines, such as problem-solving, interactive and social skills, and critical and creative thinking" (Gonski et al. 2018, p. ix). The report sees these capabilities as an integral part of the F-10 curriculum, although the curriculum and schooling models in senior secondary education "could be improved to ensure they prepare students for life beyond school" (Gonski et al. 2018, p. ix).

The analysis presented in this article shows that there is still contestation over the assessment, design and implementation of the curriculum of the senior secondary years. This has seen reforms and changes over the years to address the competing needs of assessment and reporting for university entry and to cater for the broader needs of the entire cohort. However, outcomes, particularly in terms of school completion and attainment of the senior certificate, remain uneven.

There have been numerous changes to the rules governing curriculum development and accreditation, internal and external assessments, processes of moderation, the method of governing university entry and calculating the ATAR and finally to a more recent focus on competencies and capabilities (including literacy, numeracy, enterprise skills, life skills, careers skills, etc.). Yet there is still no evidence of a consistent and shared view of the explicit and implicit purpose of the senior secondary certificates. An examination of the statements outlining the senior secondary certificates in the official documentation of the jurisdictions shows that these are more transactional and descriptive than aspirational. Most simply describe what the certificate does:

The Higher School Certificate (HSC) is the highest educational award in secondary education in New South Wales. It is awarded to students who have satisfactorily completed Years 11 and 12 at secondary school. (NESA 2018)
The Victorian Certificate of Education (VCE) is the certificate that the majority of students in Victoria receive on satisfactory completion of their secondary education. The VCE provides diverse pathways to further study or training at university or TAFE and to employment. (VCAA 2018)
The Queensland Certificate of Education (QCE) is Queensland's school-based senior schooling qualification awarded to eligible young people at the completion of the senior phase of learning, usually at the end of Year

12. The QCE records achievement of a significant amount of learning, at a set standard and pattern in contributing studies, while meeting literacy and numeracy requirements. (QCAA 2018)

The Western Australian Certificate of Education (WACE) is awarded to senior secondary school students who satisfy its requirements… … The WACE is recognised by universities, industry and other training providers. Achievement of a WACE signifies that a student has successfully met the breadth and depth standard, the achievement standard and the literacy and numeracy standard in their senior secondary schooling. (SCSA 2018)

The ACT operates a system of school-based curriculum and assessment within the policy and procedures of the ACT Board of Senior Secondary Studies. (ACT BSSS 2018)

Tasmania follows a similar, largely descriptive pattern but goes a little further in expressing personal and social objectives:

The aims/purposes of the Tasmanian Certificate of Education are to:

- recognise that a person has achieved or exceeded a set of requirements marking the end of the first phase of post-compulsory education and training
- recognise that these requirements can be achieved or exceeded in different ways, in different settings and over different periods of time
- recognise achievement and participation in both formal and informal learning.

The objectives of introducing and maintaining the qualification are:

1. to set and maintain a worthwhile and achievable set of standards for learners to achieve or exceed when completing the initial phase of their post-compulsory education and training
2. to build and maintain widespread community confidence in, and understanding of, the credibility and integrity of the formal certification that learners have achieved or exceeded these standards
3. to reflect and support increases in the participation and achievement of Tasmanians in this phase of their learning (TASC 2018).

Only South Australia (and by extension the Northern Territory) departs from this formula and outlines the certificate in the context of specific personal and social goals:

The South Australian Certificate of Education (SACE) is a high-quality, equitable senior secondary education qualification. The qualification allows all students to develop the knowledge, skills, and understandings necessary for becoming active participants in an ever-changing world. It is globally accepted that education is crucial to improving opportunities and pathways and, more significantly, enhancing quality of life. Acknowledging this, the SACE Board's mission is to equip young people with the capabilities to

move successfully into further learning and work as confident and responsible citizens. (SACE Board 2018)

Approaches to dealing with disadvantage are similarly inconsistent. They range from scholarships for students experiencing disadvantage (e.g. scholarships for Indigenous students in Victoria, Queensland and NT), to disability provisions and special consideration for students experiencing particular circumstances relating to health or learning issues (NSW, Victoria, SA, ACT), to special entry access schemes, which are usually administered by the tertiary admission agencies (Victoria, SA, Tasmania, ACT). In some cases, statements are issued relating to the range of options available to address specific issues of disengagement through the curriculum (WA, SA, Tasmania, Queensland).

However, most jurisdictions continue to struggle to meet the needs of the full range of young people in their senior years, particularly those from regional and remote areas, Indigenous communities and low socio-economic status students. There is considerable variability in apparent retention rates, in rates of attainment of the senior secondary certificates and in rates of attainment of the ATAR, between the jurisdictions. We also draw attention to the fact that approximately 20 to 40% of the school completer cohort, depending on the jurisdiction, is making a direct entry to the labour market, with all the associated problems of precarious, part-time and casual work, under-employment and unemployment. With respect to destinations, we note the lack of nationally consistent post-school destinations data across the jurisdictions, with only Victoria, New South Wales and Queensland providing yearly, representative destinations data reported in a consistent manner for the entire cohort.

These inconsistencies do not logically lead to a case for a national senior certificate, but rather require a common commitment to addressing weaknesses in both the purposes and outcomes of our senior certificates, which manifest differently in different locations. There are other inconsistencies too. The senior secondary certificates have limited emphasis on capabilities in their design and reporting and considerable variation in the manner in which literacy and numeracy minimum standards are defined, set and assessed. There is also no consistent approach regarding compulsory subjects or a core curriculum, with English a compulsory requirement in only four states/territories and mathematics or science compulsory in only one. The implementation of the Australian Curriculum at the senior secondary level also remains inconsistent and limited. With respect to vocational studies, VET subjects are available to senior secondary students in all states and territories, and all except WA allow some VET to be included in the calculation of the ATAR. They also count toward attainment of nationally recognised qualifications in the wider Australian VET sector through mutual recognition processes. The rationale for the introduction of VET in the senior secondary years has been strongly linked to engagement and retention, but there have been surprisingly few research studies examining its impact on student engagement, retention and post-school pathways.

With most VET subjects offered in the senior secondary certificates contributing toward nationally recognised qualifications in the VET sector, these courses are at the lower levels of the Australian national qualifications framework, referred to as

the Australian Qualifications Framework (AQF) (i.e. levels 1–2 on a 10-level framework). The AQF has been designed to position all courses offered within the tertiary education sector on a single levels framework, ranging from level 1 (e.g. a Certificate 1) to level 10 (e.g. a PhD). One might therefore ask where the senior secondary certificates might be located on the AQF and what role they play articulating into different AQF levels. Most jurisdictions are silent on the location of their certificates on the AQF scale. We know, however, that, within each jurisdiction, the senior secondary certificates enable students to undertake units of competency that package toward qualifications at various AQF levels, from basic Certificates I & II, to Certificate III (often in apprenticeships) to more advanced Cert IV, Diploma and Advanced Diploma qualifications. Students can also complete subjects within their senior secondary certificate that can provide credit toward bachelor degrees. This extreme range of levels provides no easy solution to allocating an indicative AQF level to the senior secondary certificates. In 2010 when the 16 qualification types were originally aligned to a 10-level framework using item response theory and survey design methodology, it was empirically found that the senior certificates of education were located at level 3 on the 10-level framework (Gillis et al. 2010a, b). However, politically this was not acceptable to the major industry stakeholders due to level 3 being largely associated with trade apprenticeship qualifications which could not be seen as equivalent to a school-based qualification.

With respect to ATAR, we have shown that all jurisdictions continue to use an ATAR to help universities select applicants, particularly for entry to high demand undergraduate courses by school leaver applicants. This would suggest that recent reporting of the demise of the ATAR is premature.

Conclusion

Keating et al. (2012) have argued that there are inherent limits in the capacity of Australian secondary school systems to raise attainment and school completion rates, limits which are underpinned by flaws in perceptions of curriculum and pathway equivalencies. Our findings suggest that these flaws are evident in the extremes of variability in school completion, as between jurisdictions and regions across the country, and in the contested and poorly understood roles of vocational studies in the senior certificates. The flaws also extend to historical, recurring arguments over approaches to assessment, the role of the certificates in facilitating university entry through the calculation of ranking measures and other approaches, the inability of the states and territories to find any common ground which might open the way to nationally consistent approaches to addressing the weaknesses in the design and delivery of the senior certificates.

VET in schools, as a means of engagement, seems to have reached the limit of its capacity, with enrolments showing no growth (and in fact decline in some jurisdictions) over the last 6 years (National Centre for Vocational Education Research [NCVER] 2019). VET, while providing a refuge in the senior secondary curriculum for some students, has neither been able to address the specific skills shortages that require sustained work-based training (as offered in

apprenticeships) nor magically change a labour market dominated by low paid, low skilled and mainly casual, part-time work.

The distressing inequalities in school completion and achievement outcomes have also been well documented (Teese and Polesel 2003). While increased access to the senior certificates has been built on the strong democratising foundation of our public high schools—thus raising attainment and reducing inequality to an extent—unequal outcomes persist (Teese 2014). The existence of curriculum strongholds, providing access to the most desired university pathways, impenetrable to our most disadvantaged students and defended by structures of selective schooling, de facto tracking and private schools, are evidence of the continuing inequality inherent in our senior certificates.

Inequalities, as between student groups, between jurisdictions (and between regions within jurisdictions), make it tempting to identify and highlight weaknesses in specific states and territories (relating for example to retention, certificate completion or participation of disadvantaged groups). However, this would sidestep the more pressing need to define the requirements of a modern senior secondary curriculum and its certification options and, having done so, to set realistic goals for improvement and specific measures to support their attainment.

To undertake such performances of "review and recommendations" in parallel, isolated exercises in each jurisdiction, as has happened so many times in each state and territory over the last 50 years, can no longer be seen as justifiable. We would argue that these reviews have been inefficient and wasteful, especially in the context of a national population of fewer than 25 million. This does not mean that there is no longer need for a debate, but that the debate must have universal, not parochial, parameters. Nor does it mean that a national senior certificate is the answer but that consistent and coherent strategies to address the human needs of young people must take equal place alongside the strategies to address Australia's qualifications and skills needs. This debate requires a nationally consistent framework for the delivery of senior secondary education, with the flexibility to address the very different needs of jurisdictions as diverse as Victoria and the Northern Territory, as diverse as a city of 5 million inhabitants such as Melbourne, or a town of four people such as Cooladdi in remote south-western Queensland. This does not need to comprehend a single, national certificate but does need to consider a consistent and inclusive purpose.

Gonski et al. (2018) report has provided a framework for this debate. This framework requires us to think outside the "industrial model of school education" which has served us well in the past. We would suggest it also requires us to think outside the rigid and highly politicised model of individual senior certificates which seem to lack a clearly articulated purpose and which represent a complex maze of rules and regulations adapted over the years to accommodate a range of needs—the selection needs of universities, the skills and competency needs of employers, the civic and citizenship needs of society, the engagement needs of a diverse body of learners, and the personal and social needs of young people themselves. This will only happen when effective reform of our senior certificates is built on openness, honesty, vision and informed decision making. It may well be that the difficult pandemic crisis gripping the world in 2020, with its disrupting effects on labour markets and on

the institutions delivering education and training, will finally compel us to put aside much of the past contestation surrounding our senior certificates.

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